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Your Wish?

I REMEMBER a game in which, among many questions asked, was this one: "If not yourself, who would you like to be?"

This wet, foggy January afternoon, when we can not go out without getting the soles of our shoes macerated, while our reading-matter available is exhausted and the last number of CLINICAL MEDICINE scanned, studied and gleaned, we may just amuse ourselves, and possibly you, by discussing this question.

There are a good many folk we might wish ourselves to be—J. Ham Lewis with his sartorial gorgeousness Bryan with his silver tongue, Roosevelt with his gumption, Carnegie with his millions, Wilson with his opportunities, Hill with his brains Osler with his reputation, Cummings with his luck, Rockefeller with his power, or some one of the many others possessed of beauty, physique, happy disposition or other desirable qualities. However, we pass each and all these, to wish ourselves to be—once more—a young doctor, just fledged, past the last exam., and sitting in our office waiting for the first patient.

We should begin by making some good resolutions, and the first of these, that the next human being who came within our reach should be our Specialty. No matter whether nothing whatsoever ailed him. he should be the starting point of our Career. It may be the postman, the milkman, book-agent, friend, pedler, beggar, collector. There's bound to be something the matter with him—pimples, tetter, dyspepsia, a mole, wen, wart, red eyelids, baldness, fatness, leanness, something in which he departs from the normal standards; or, maybe, there are indications as to what may probably be the aberration he will display in the future.

Don't mention it—today. Get rid of him, but read him up. Suppose what you saw on him is a wart: search your textbooks and the medical libraries for every item you can find relating to warts, their nature, meaning, causes, dangers, treatment; celebrated warts of history; traditions and superstitions concerning them. Make yourself an authority on warts. Learn of the disease of Peru known as verruca; the warts on eucalyptus trees in Australia; the wart on the faces of great men and fair women; the relations of warts to tuberculosis; the derivation and meaning of the name; the transformation of warts into epitheliomas; venereal warts; toad warts; senility warts; mucous warts; all the curious and little-known lore you can gather concerning these new growths.

Then get a hold of that warty individual again and open up on him. Tell him so

much about warts that he will be amazed—he will tell everybody he knows that you are a marvel of erudition, that you know so wonderfully much *even* about warts. He will never suspect, of course, that this is the only subject on which you could make a creditable presentation, but naturally will assume that you are equally well informed on all other topics.

The thing will be talked about. The world is always looking for men who can teach it something. Somebody will ask you about something else. Sidestep it. Don't allow yourself to reply, under the mistaken notion that you know anything. You don't! You only think you do, just as everybody else does. Wait till you get away, then streak it for the library and find out what there is to know on this topic also. Never give your opinion until you are satisfied there is no source of information open to anybody in your position that you have not exhausted. Then—and not till then—open the floodgates and let your knowledge pour out.

Keep up this policy, and before long people will be coming to you for information on all sorts of things. Always take your time, and prepare as if for a state-board examination. Your reputation will grow fast.

By and by the time will come when you are called as medical adviser. To what? Well, nearly always the first time it is in an emergency case—and this, mark, is the critical point for you as a doctor. If you are ready—better so than the others—your future is safe; but, if not, as surely as the sun rises and sets, you will be set down as that most useless member of society: a "theoretic man," not practical.

No amount of knowledge will excuse the lack of quick helpfulness in the time of need. The other man may not know the lights from the liver, but if he puts his finger on the bleeding vessel and stops the hemorrhage while you are thinking of what prescription to write he will have "the call" on you.

I have talked of these emergencies before, but the matter is of enough importance to bear repetition. Go over your list of diseases and injuries and ask yourself what you would need to meet each of them. Then go to work and combine these needs and provide a case to meet these wants. Even if it takes your last dollar, get this emergency-case and have it where you can grab it and run whenever you are called. If it is well planned, you will not have to ask what is the matter (something the messenger rarely knows, anyhow), but you can go, confident that you have every possible need provided for.

Not always, alas and alack! Gee, how well I remember sitting with my finger on a cut artery while somebody went for more ligatures—and how I chased a boy about the street with his prepuce cut off and he bleeding while someone got more anesthetic—and how a babe died from a penny whistle in its larynx because I had not so much as a pocket-knife that would cut. You, my friends, hear about my successes, mostly—naturally—but I've had my failures the same as the rest of you. The first and last time I tried to dilate an anal sphincter without giving an anesthetic—I'll just stop here, for, if I get to calling the roll of all the fool things I've done, I fear I'll go and drown myself.

Instead of that, we will think of the many times that blessed emergency-case has helped us out. First on the scene, first to suggest and apply the right remedy, right there in the case, because we had thought it out long before and knew exactly what was best to be done.

It is while the youngster as yet has nothing to do that he can do his best work getting ready to do things. After a while he will have no time.

By the way, have you renewed your subscription for 1914? Please do so promptly. Also, get your neighbor-doctor to join the family.

DEATH OF SURGEON GENERAL TORNEY. COLONEL GORGAS SUCCEEDS HIM

George Henry Torney, surgeon general of the United States Army, died at his home in Washington on December 27 last of bronchial pneumonia. General Torney was born in Baltimore, June 1, 1850, and had he lived would have been eligible to retirement from the service the coming June. His first service was in the navy, and he was appointed assistant surgeon of the navy November 1, 1871. Resigning from the navy June 30, 1875, General Torney was immediately appointed first lieutenant and assistant surgeon of the army, being promoted rapidly until he reached the rank of major upon August 8, 1903. He became a colonel of the medical corps April 23, 1908, and was appointed the surgeon-general of the Army, January 14, 1909.

General Torney saw rigorous service in the Philippines and in Cuba. He was a member of the American Medical Association, of the Association of Military Surgeons of the United States, the American Red Cross.

Army and Navy Club, Catholic Club of New York, and Bohemian Club of San Francisco.

LATER.—Since the preceding was written we have learned that Colonel William C. Gorgas, chief sanitarian of the Panama Canal district, has been appointed to succeed General Torney as Surgeon-General of the United States Army. The appointment is one which will meet the approval of every physician in the country. Our army is to be congratulated. We are proud of our medical corps—and we expect to be more proud, with General Gorgas at its head.

A skeptic in therapeutics can teach nothing.
—Sir Dyce Duckworth

TURN BACK OR GO ON?

I sometimes ask myself the question, Am I hopelessly behind the profession, or no less hopelessly before it? For that I am out of the full sweep of the current of medical endeavor, is evident. Am I in an eddy, circling back toward a point the main body has long since passed, or am I feeling my way along a short-cut and opening up a new and better channel, which—although today there is but a feeble trickle—will some time enlarge until one day the great body of water will sweep through it on its seaward way?

I know I am right; I know that one day the medical profession will return to the use of drugs. I know this, because I have faith in the medical profession and in humanity. It will be so, because it must. It is right; and along this line lies progress.

Here is my first argument:

The medical profession today is ignorant of its first principles, of the fundamental facts upon whose recognition is founded the profession of medicine. I refer to physiology and pathology.

Not long ago there came from Dr. Richard C. Cabot, of Boston, an astonishing verification of this statement; for the researches made in very many autopsies showed that the diagnoses made by able physicians were correct in less than twenty-five percent of the cases! Little wonder the therapeusis had failed, when in three cases out of four the doctors were treating the wrong ailment.

The primary difficulty lies in the limitation of the human intellect. The earnest student tackles his anatomy, finds its study absorbs all his powers, and leaves college in four years with a fair knowledge of anatomy and barely a smattering of the rest. Naturally, he becomes a surgeon and applies to his professional duties all he knows.

Now, why should the diagnoses be wrong seventy-five times out of a hundred? The reason is, because the doctors do not know their physiology well enough to recognize the disorder in the working of the bodily functions, and they do not know their pathology well enough to recognize the disease that induces the disorder.

The difficulty lies, first, in their ignorance, and, secondly, in their neglect of the known and accessible means of completing the diagnosis. Where is the consultant who has not had occasion to echo the cry of Goodell, that had the doctors who brought him cases for diagnosis used the means he did they would have been able to make the diagnoses themselves. Are there any old Jefferson men who do not recollect the first question of the great Da Costa, "Have you examined the urine?" Only too often the doctor has to acknowledge that he had not made a physical examination!

For years I have been urging upon my colleagues the necessity of studying their patients more closely; of familiarizing themselves with the normal operations of the human body and the limits of reasonable variation therein; of studying modern pathology, so that when they recognize disorder they may also know the cause; and, knowing this, they may also know when and how to intervene usefully.

I have urged upon my friends the necessity of using the modern means of precision in diagnosis, the thorough physical examination, the study of each organ and its functionation, of the secreta and excreta, of the aid afforded by biologist and chemist, through which the vast majority of causes of disease are well within the diagnostic reach of the average doctor.

It does not require a superman to be a successful diagnostician today. It is an easy job compared with what it was when Da Costa and Loomis put out their first editions. There isn't a reader of this journal who is not capable of diagnosing ninety-five to ninety-nine percent of his cases if only he will take the pains.

Curiously enough, therapeutics is away ahead, waiting for the crowd to catch up. We therapeutists have elaborated on several of the finest weapons, as perfectly adapted to the multitudinous uses to which you can put them as are the instruments in the dentist's cabinet to his uses. Our wrenches and levers are at hand, ready to tighten or loosen, raise

or depress any and every function of the human body. Just show us the disorder—and here's your instrument, exactly fitted to the need.

If you will persist in extracting all teeth with one forceps or with a rusty, infected old turnkey, so much the worse for you and your patients. You don't have to, if you'll only select the right tool for each tooth. And just so for nearly all these purposes drugs offer the very best means of relief. Giving full value to every one of the non-drug methods, they do not best meet five percent of the cases coming to us; and the present tendency to use anything rather than drugs is so silly that words are wanting fitly to characterize its imbecility.

Now, as to surgery. God forbid I should so much as seem to detract from that branch of the healing art that has rendered it so illustrious. But—why wait till a case has become surgical? Why not foresee the difficulty in time to prevent its going so far that removal of a part become useless is all that is left? Why, indeed, except that, as aforesaid, you are not qualified to make early diagnoses?

You should be!

Come back to my proposition—take charge of one hundred families at so much per annum, or per mensem, and devote yourself to the study of these individuals in health. Study them physiologically, as if you were in college preparing for final examinations. Study them and their surroundings, and habits, and tendencies. Get to know them so well that the slightest deviation from health arrests your attention, and be ready with advice long before a remedy is needed.

Every time the doctor says to a patient "the time for successful treatment is past," he indicts the wornout system of today and chalks up a murder against it. For what is murder if not the failure to save a life when it can be saved?

Am I right or wrong? If wrong, show me. If right, then please, boys, hurry up and catch up. It's lonely "way out front here."

I wish to record the prediction, that the year 1949 will see an enthusiastic revival of drug therapeutics in full force. That will give the surgeon time to subdue the last remaining relics of the human body and perfect his technic to the ultimate atom of perfect perfection. Pathology will be fully developed; the last bug will have been tail-salted and classified, the biology of the protozoa likewise elucidated. The last remaining possibility of non-drugdom will have been exhausted; and in the sheer impossibility of finding any other avenue for progression men will turn to drugs.

But it will be a very different therapeusis from the old. Men will use known agencies, for obvious reasons, will seek to apply direct remedies to well-apprehended disorders of function. They will use single remedies; and the man who employs a shotgun mess will be looked upon with bewilderment.

The science of the pharmacist will lie in separating drugs rather than in mixing them. The known active principles will be studied individually instead of in classes. The vegetable world will be ransacked for more principles, and every new one produced will be thoroughly tested in the laboratories and then no less thoroughly tried out in the great clinical laboratory, the sick-room.

There will be no disputes as to treatment, for knowledge of disease and of remedies will have advanced to such a stage of certainty that there can be no dispute. Only one way will be open—the right way.

Speed the day.

Work has won the victories
In the stress of strife;
Work has crossed the stormy seas,
Work has solved the mysteries
In the lore of life.
Work has never time for tears
While there's more to do—
Work upon the path of years,
As the golden goal appears,
Sees some goal anew.

—Douglas Malloch.

ANOTHER BURDEN FOR THE PHYSICIAN

It would seem as if the lot of the average physician were hard enough already, but our law makers seem intent upon making it still harder. However, the latest movement to reduce the size of the physician's income and circumscribe his professional activity comes from the Postoffice Department. Postmaster General Burleson has recently so altered the regulations governing the admission of poisons to the mails as practically to debar manufacturing pharmacists and other distributors of drugs from using the parcel post for the delivery of a large number of medicinal substances to their customers. We feel perfectly certain that he could not have appreciated the injury such a ruling would do to a large and influential class of honorable and law-abiding citizens, otherwise the regulation would have been made in a somewhat modified form.

For many years only those "poisons" have been refused admission to the mails which "outwardly and by their own force" were deemed likely to be harmful to the mails themselves or dangerous to those handling the mails. So far as we are able to understand the new regulations (just put in force by the present Postmaster General), it seems to be the purpose to exclude *all* poisons, and unfortunately no line of demarcation has been drawn between useful medicinal substances and harmful poisonous substances.

The meaning of the present regulation is exceedingly obscure. While poisons are debarred, no definition has been offered by anybody in authority for the word "poison." However, the Postoffice Department clearly intends to exclude all narcotics from the mails. This is shown by the fact that the New York manager of a large manufacturing pharmaceutical house was arrested on February 9 for sending 500 1-24-grain heroin tablets to a wholesale druggist in Boston. The firm ordering them specifically requested that the tablets be sent by parcel post. The meaning of the law was presumably changed by administrative order, and its character and scope are not understood even now. However, if this man is convicted he will be heavily fined and may be sent to a federal prison.

Under the circumstances, no purveyor of drugs, big or little, will dare to send "poisonous" medicinal products through the mails. How such a change of business policy will react upon the physician you can all understand. It will make it more difficult and expensive for him to secure supplies, as we shall show.

Every physician has legitimate and proper uses for such narcotic drugs as morphine, heroin, and cannabis indica, and for such poisonous substances as strychnine, aconite and arseni but in spite of this will be unable to derive much advantage from the parcel post. In securing "the tools of his trade" he will hereafter be discriminated against, as compared with other American citizens, and to a much larger degree than will appear at first sight. The emergency remedies which he must use in his practice are very largely poisons. It is these remedies which he desires to get on short notice. Upon the skilful use of these remedies the lives of his patients largely depend, and yet to secure them he will be forced to pay unusually high rates of carriage, suffer grave inconvenience, and in many a critical time go without them altogether.

Not only does this regulation injure the physician but it hurts the retail druggist also, since it makes it practically impossible to replenish quickly his stocks with small quantities of important drugs; also, he cannot even send by mail to a customer the drugs ordered on a physician's prescription. Neither can the doctor do this himself, if his prescription happens to contain one of the proscribed poisons.

At present, dealers in drugs are sending medicinal substances which happen to be poisons exclusively by express. When the package happens to be a small one, the carriage in many instances will equal or exceed the value of the remedy purchased. The many physicians who are located at points remote from the railroads will find it exceedingly difficult to secure supplies promptly Just what these men—you—are going to do we do not know, but that these men—you—are being made to suffer a grave injustice, an injustice which is shared by the many able and conscientious drug purveyors who are in no wise accessory to the traffic in narcotic drugs, but are fighting this traffic constantly and consistently, is equally plain.

Under the circumstances, we think it but proper that every physician who objects to the form of the regulation should register his protest with his representatives in Washington and with the proper administrative officers, including the Postmaster General, who is more than an able man—he is a square man. When he understands the exact situation we look for a revision of the post-office ruling.

More is involved in this matter than the mere monetary loss to the profession, although this will amount to many thousands of dollars annually, which necessarily must come largely out of the pockets of the physicians of this country. The pity is that this is only one of *many* measures now being considered, and clearly designed for the repression of the rights of the medical profession. Those who desire to retain a proper degree of liberty of action—the liberty to do right, never to do wrong—should speak now before it is too late.

Wherever possible every physician should, of course, arrange for a local source of supply for the "poisonous" remedies in constant demand in his practice. If such a satisfactory arrangement cannot be made he should order in quantities large enough to warrant express shipments.

Finally, we should unite with all other good citizens in working out uniform legislation for

the suppression of the illegitimate traffic in the habit-forming drugs. No class of men is more conscious of the dangers of these drugs, more anxious to see these dangers removed and the public protected from rascals of all kinds, than the members of the medical profession.

Mental work of a congenial kind is a great stimulus to bodily vigor: to think good thoughts, work them out like nuggets of gold, and then coin them into words, is a splendid joy.—Elbert Hubbard.

THE SEXUAL-INSTRUCTION CRUSADE

May we, without risk of being misunderstood, be suffered to raise the question as to whether the modern zealous crusade of sexual education is not being a little overdone; whether, indeed, in some quarters at least, it is not being pushed to rather absurd lengths? It is, to be sure, quite natural that we should do this.

We have suddenly awakened to the truth that sexual diseases, which for so long we were accustomed to regard with indifferent complacency, are responsible for some of the most disastrous and far-reaching ills to which the race, no less than the individual, is heir. Along with this awakening came an equally startling recognition of the fact that there had hitherto been a "conspiracy of silence" on the part of those who ought to have spoken concerning the truths of the relations of the sexes. It is but natural, that, under the influence of our self-reproach and in our eager zeal to make up for past neglect, and no doubt spurred a little by public sentiment on the subject, we should rush to the other extreme, and indulge in all sorts of extravagances.

We would not be misunderstood in this matter. We are heartily in accord with the general wisdom of a policy of frankness and knowledge in things sexual, as opposed to one of suppression and ignorance. There is, we are convinced, safety in the former, even as there is danger in the latter course. But we do protest that in this, as in everything else, sanity is the keynote of real efficiency; and we do feel constrained to utter a word of warning that, in our newborn and rather vociferous contempt for "prudery," we are running the grave risk of rudely shouldering out of court that wholesome reserve (of which prudery is but the spurious counterfeit) upon which, after all, the strongest defense of sexual morality has always rested, and upon which it must continue to rest.

While freely admitting, as we already have done, the value of frankness and enlightenment, we still maintain that, in order to keep men and women from becoming swine, it is not altogether necessary that they should receive a minutely detailed course of instruction in the habits and diseases of swine.

WHAT IS YOUR EXPERIENCE WITH BACTERINS?

A Minnesota subscriber suggests that we have a symposium on "Bacterin Therapy." He says if we make an appeal for contributions we shall "be surprised by the response and results shown by it."

The suggestion is an excellent one, and we extend an invitation right now to every reader of this journal who has had experience with these remedies to tell us just what he is doing, how he is doing it, and the results he is obtaining.

Make the article short. Boil it down. Give actual experience, not theories. Let us have a lot of articles from a lot of men, out of which we can help to build a foundation for this growing structure of biologic therapy. Also tell us of your experience with the antitoxins and serums, using the same terse, right-to-the-point language and dealing only with actual experience. Everybody is invited.

Action, though crowded with failures, is better than idleness among those who "have been."
—James A. Worsham.

REPORTING THE ATYPICAL CASE

So far as the clinical side of medicine is concerned, it rests wholly upon case reporting. Without sick people, there never would or could have been either a science or a practice of medicine. And without the concrete embodiments of pathology and therapy represented by the patient, there would be no pathology or therapy. The proper study of mankind, says Pope, is man. Similarly, the proper study of the medical man is the patient, and the case-report is his ultimate and most instructive textbook.

Unfortunately, however, a great deal of case-reporting appearing in the medical press of the present day is not of the character most calculated to furnish the practitioner with substantial assistance in the performance of his daily work or to contribute to the permanent central progress of medicine as a whole. Reports of cases, as furnished by a large propor-

tion of the writers to current journals, fall into one or other extremes of practical uselessness. Either they relate to altogether exceptional cases (by which we mean those cases so rare in their aspects as to constitute what our biological friends call "sports"), or else to some case or group of cases so commonplace or altogether typical as to savor of tiresome redundancy in their being reported at all.

Neither of these classes of case-reports are of any real use to medical literature; certainly they are of no working-value to the practitioner. The rare case is the medical and surgical exception; and no working-principles, whether of pathology or of therapeutics, can be predicated upon an exception. The report of such a case may be interesting as a curio or flattering to the vanity and reputation of the physician reporting it, but it has no genuinely scientific significance, and certainly no helpful influence.

The stereotyped, cut and dried report of the typical case, on the other hand, is equally devoid of interest to the scientist or of value to the practitioner. As a matter of fact, the typical case is, itself, a rare occurrence; and the reason why so many cases of this kind are reported in our literature is not that they are numerous or common, not, indeed, that they really occurred at all as their narrators relate them; but, because the men who report them either have not perceived or do not present those very elements of atypicality which would make them interesting and instructive to the reader.

This, then, is the class of cases that are most valuable to the working-literature of medicine and surgery, and which ought to be the most frequently and carefully reported—the atypical form of the commonly met disease. It is not the typical, but, rather, the atypical, features of disease which puzzle and perplex. And it is not the typical, but the atypical, features that throw new light upon the pathology and treatment of old disease-conditions.

Not that we would advocate rushing into print with every little variation of pathogenic conditions or every slight improvement in some difficult, out of the ordinary case. But any considerable departure from the typical, or classical, course of a well-known and well-distributed disease, and any worth-while experience with a new and rational mode of treatment suggested by such variation, intelligently reported, is of geniune practical value to medical science and practice and should be communicated.

To report the average, typical case, is a mere waste of time, a rehashing of textbook information. To wait for the rare case, is, in most instances, hopeless, because rare cases naturally are rare, and when they do occur are of no working-value. The intelligent observation and reporting of those atypical cases of common diseases that may shed new light upon their pathology and treatment are the ideal methods of promoting real progress upon the practical side of medicine.

It is this kind of case-reporting to which we aim to devote the pages of CLINICAL MEDICINE and to which we invite the co-operation of our "family" in all parts of the country—and other countries.

The soul of man can never be enslaved
Save by its own infirmities, nor freed
Save by its very strength and own resolve
And constant vision and supreme endeavor!
You will be free? Then courage, O my brother!
—George Cabot Lodge.

CONCERNING COUGHS

Sang the bard, concerning the happy unsophistication of the English peasant:

A primrose on the river's brim
A simple primrose is to him,
And nothing more.

So is the cough to the layman—a cough, *et praeterita nihil*. So also is the cough to the great majority of medical practitioners, we fear, if one may judge from the fashion of the prescriptions that are written and proffered for the relief of this most familiar of disorders.

"Stop that cough," for years the trade-mark of a certain famous brand of patent cough lozenges, would appear to be the general watchword of the regular practitioner in dealing with the patient who coughs. Proof? You see it exemplified in the administration of a growing list of sedatives, ranging all the way from opium to licorice; varied at times, it may be, by the resolution, "Make him cough," and using for this latter purpose the group of drugs known as expectorants. Yet there does not seem to be any guiding principle to determine which of these two therapeutic courses are to be pursued, except the rather crude one of the patient's already existing attitude toward the question of coughing: if he is coughing freely, stop it; if he isn't, why, make him!

Rarely, indeed, either in literature or in practice, do we see any serious attempt made to determine the pathologic physiology of the cough, its cause, its mechanism, its signifi-

cance, and to apply the rational remedy in accordance with these considerations. Nevertheless, there are, as everyone must recognize upon a little reflection, several varieties of cough, differing as radically in their nature and mechanism as so many utterly distinctive pathologies, and calling for equally different modes of treatment.

There is, for example, the bronchitic cough. This is, perhaps, the simplest and most direct in its physics and its philosophy. In its most elemental form, the bronchitic cough is the response of the motor organism to the irritation of foreign substances on the mucous surfaces of the bronchial tubes calling for removal. It is, in fact, the same thing, in physiologic principle, as the sneeze. It is a purposeful, protective, autoremedial measure. Hence, the principle of its treatment is, that in the main it should be encouraged, assisted.

The detailed ways and means of its encouragement, to be sure, may vary, and must be employed according to the practitioner's judgment. If the offending exudates be tough and tenacious, the best way to help is to soften and relax. If they be already loose and fluid, then the indication is to promote their expulsion. There may even be individual cases where the principle must be violated and the cough suppressed, because of other considerations. We are not stickling for details. We are concerned in pointing out this distinctive form of cough and the rational principles of its therapy.

The emphysematous, asthmatic, cough is altogether another type. There the causative factor is not the irritation of the mucosa by offending exudates, but an excessive intrapulmonary air pressure combined with a state of more or less nervous panic. The cough does no good, except for the relief that comes from resulting relaxation (which may better be brought about by other means), but, rather, harm.

The logical principle of its management, therefore, is, to suppress it; and that not so much by local action upon the respiratory mucosa as by sedation through the central nervous system. The details, again, are unimportant here. The essential point is, that we have an entirely different type of cough, with equally distinctive principles of therapy.

Once again. There is the pneumonic cough, of which pneumonia furnishes the most extreme example, but which occurs in advanced tuberculosis, too. The physics of this type of cough is neither mucous irritation nor intrapulmonic pressure, but the result of crippled lung-tissue and inadequate breathing. As a cough, it is neither to be actively encouraged nor actively suppressed. The truth is, it is not be be considered as a sheer respiratory symptom at all, but as part of a vicious circle of which the circulation is the paramount arc.

The principle of treatment is, to go back of the lungs to the heart, and, by holding the heart in prolonged diastole (with digitalin, as a rule), to give the embarrassed right auricle and pulmonary system time to disgorge themselves.

These are but a few illustrations of the subject. They are enough to drive home the point we are trying to make; namely, that a cough is not the isolated, uniform, cut and dried phenomenon that it so often is mistaken to be; rather, that it is part of a physiologic circuit the entire ratiocination of which must be traced and analyzed and the logical train of events set in motion for its proper regulation.

Here is one of the many fields, right at our hand, almost trite in its familiarity, where there still is much to be done in the way of rational drug therapy.

It is sometimes being forgotten that in the matter of treatment clinical observation must always be the final appeal.—Sir Dyce Duckworth.

TWO MEN: JACK APPLE AND LOUIS EYTINGE

Today I picked up a copy of *Office Appliances*, a magazine in which the doctor is not supposed to be interested at all—although he should be. A story which I found in it, and which I am now going to print, proves this assertion true. First read the story and then I will tell you something about the man who wrote it.

"A bright young man had but two days before graduated from the Georgia Institute of Technology, and the future loomed large before him. In the blithe bravery of his success, he was sporting in the surf at Savannah —made a dive and—his friends carried him out of the water with a broken neck.

"Time and again they expected Jack to die—but he wouldn't. He always was a disappointment to the yelpers and croakers. His technical training was no longer of value to him—for he was a man paralyzed from the neck down. Some niche would have to be found in which he could fit. His brain was too active to permit of idleness—even though he were helpless.

"You know the hard name the boring life-insurance solicitor has given to his following —you know you fly as from a pest when the average pedler of policies approaches. You know that it requires initiative, ingenuity, get-up-and-at-them-ness—and despite the handicaps in front of him Jack determined to sell life insurance. He had but one thing that was favorable to this resolve—his father had been a general agent for the same company he joined and Jack had grown up in the insurance atmosphere and knew the business.

"Every day a small, especially built wagonette is drawn up before Jack's door, a low reclining-chair is trundled out—tenderly, because of the burden it bears—and placed inside the wagonette. A young boy drives the conveyance and calls the prospects out to the curb. He has to carry the rate-book and to handle the papers—to turn the pages—to do the writing—to hold the 'phone receiver to Jack's ear when the latter stays in his centrally located office and sells insurance.

"Jack can't do a thing but use his head—but they know the smiling fellow everywhere in the city of Savannah—they know him at the theaters and at the ball games. He's the cheeriest fellow I've ever heard about—they say he is unusually bright, unqualifiedly a business success—wholly good-natured and mighty opulent in his optimism. He shames the rest of the force of that company when he writes his formula for success as 'nothing more than using knowledge coupled with concentration and persistence.' And he lives up to the line he wrote: 'These three words mean more, in my opinion, than a whole dictionary of others—*Make friends! Smile!*' "

This is a beautiful story of a remarkable man; but equally interesting is the story of the man who wrote "The Story of Jack Apple." And, by the way, the latter was not intended to be a "story" at all; it was copied from a letter to a friend and is a natural and spontaneous expression of sympathy, springing out of the heart of a man who has suffered himself, and has conquered.

The writer of the story, Louis Victor Eytinge, is a prisoner in the state prison at Florence, Arizona. He was convicted of murder and is in for life. Prior to this, he had a criminal record, having once served time for forgery in the Columbus (Ohio) state prison.

I do not know whether Eytinge was guilty of murder or not. He says he was not, but the courts have decided that he was. Whatever the truth, when he was committed to prison his condition seemed about as hopeless as that of any man in the world. Look at him! just a young fellow, and condemned to spend the remainder of his days behind the bars; and, to make matters as bad as could be, he was apparently far advanced in tuberculosis, weighing at the time only one hundred and nineteen pounds.

But there was the same determined will in Louis Eytinge that there was in Jack Apple. Most men under such circumstances would have given up and died. Not so Louis. He made up his mind to live—not only to live, but to get something out of life.

As a first step toward his self-cure, he began to study tuberculosis, and immediately he set about making money enough to buy himself milk, cream, butter and other articles of diet more generous than the regular prison fare. He "read up" on the disease, and then tried various remedial agents, among these, I am happy to say, nuclein solution. That was some years ago. Today he weighs one hundred and sixty pounds and is entirely well. I hope the nuclein helped.

Especially interesting was his method of raising the money he needed. Although a prisoner, he went into business, beginning the sale of Mexican hair-work, which some of his fellow convicts were making during their few leisure hours. Of course, there was not a market for such goods in the state prison; so, he began to write letters to people in the outside world, these gave him the names of their friends, and gradually he built up a mail-order business which brought him in a comfortable income—enough to afford spending-money for his convict-friends, after satisfying his own needs. The last I heard from Louis, through a common friend, he was making about $3000 a year, and out of his profits he had been able to pay back to the state the expense incurred in putting him behind the bars.

The secret of his success was in his letters. These letters were intensely human, filled with optimism and faith in his fellow man, and they "pulled!" They were written with the utmost care, and, yet, in every line they breathed spontaneity. Read again the story of Jack Apple, which I have just quoted, and you will understand what I mean.

Eytinge's letters attracted the attention of people who appreciated his talent, and he was approached by men who wanted the kind of merchandise which he was able to supply—letters. And, so, he began to write letters for other people, and then to write advertising; and in these ways he was able to add still further to his income. Just how much that

income is today I do not know, but it is safe to say that this "lifer" is making more with his head behind the bars in the Arizona prison than most of us, living outside of it, are with head and hands combined. All this he was able to do because the warden of the Arizona prison had adopted a broad-minded and humane method of treating his charges instead of falling into line with the narrow and cruel customs now generally in vogue.

Nor is this all that Louis Eytinge has done. Being a criminal and a prisoner, he was alive to the needs of other criminals and prisoners, and through his pen and the influence which he has been able to command, he has succeeded in still further ameliorating the condition of all his fellow prisoners, so that today—thanks, in part, to his efforts—the Arizona prison is in many respects a model, exemplifying my own repeatedly expressed belief that penal institutions should not be established for the increase of human suffering, but should be reformatory and humanizing, as well as penal.

The criminal is not a thing, a dog, a mere animal. He feels, suffers, loves, has longings, aspirations and ideals like others of the class from which he sprung. He should be given "his chance." If proper influences are thrown around them and suitable opportunities afforded, there is no reason why the character of hundreds of these men should not blossom and bear good fruit, just as has the character of Louis Victor Eytinge. What *right* has society to crush in a man all that is good when it sends him to prison?

Some day we hope the prison doors will open for Louis Eytinge; for, whether he was guilty or innocent, he has shown that he has a right to live, and, it would seem, has repaid society for all the harm he has ever done it.

When I read the stories of men like Jack Apple and Louis Eytinge, it makes me ashamed of my own failures to make use of the magnificent opportunities which are mine and which are denied these men. I know, though often I am ashamed to confess it, that what I am depends upon myself and upon no one else. The man who charges his failures upon luck or lack of opportunity should consider the careers of these two men, one a helpless paralytic, the other a life-term prisoner.

There is not a man who will read these lines who would exchange places with either of those two men, and, yet, thousands of doctors are bewailing the fate that seems to close for them the door of opportunity. It is not closed. Examine it, and cross-examine yourself closely, and you will find a way to open it.

Some men are ground down on the grindstone of life, while others are polished up—it depends on their kind of stuff.—Stewart.

WHAT'S THE USE!

There isn't a location in the United States where a doctor can make his living but there's a doctor already there. There isn't a town that can support a dentist, lawyer, carpenter, blacksmith or any other craftsman, but has two or more competing for the work. There isn't a hamlet, but has a school, unless it's too poor to support a teacher. There isn't a community that can support a church, but has three, two of which receive outside aid. There isn't any place for dry-goods, groceries, clothing, or any other business that isn't overdone. Look at the drugstores, and saloons, and clothes-cleaners, and tobacconists, and storage-houses; look at the unemployed laborers! There are too many men in every branch of man's labor. Better have a war and thin them out?

Women? Of course there are too many women. Take up any newspaper, and see how many items you can find where two or more women claim or want one man. Try to find employment for any woman that will yield her support, and see! Find a household that does not shelter at least one superfluous woman, one that doesn't give a home to "Aunt Hannah." Yes, there are, surely, too many women.

The State can't build jails to hold all its criminals, asylums enough for its insane, hospitals for its sick, almshouses for its poor, schools for its children.

Too many of everybody.

Brahmin and Buddhist went over this ground ages before the Galilean walked the earth, and they came to the conclusion that nothing was any use: that world and life in it were irretrievably bad and the best thing that could happen to anybody was to get out of it. Pessimism was the weighty claim with which the Brahmin shackled Media, and Buddha added to its weight. Yes, Gautama, who, dying, gave as his parting message to man the words that can not die, "Be kind to all that lives," he also found no heaven promising so much as Nirvana—nothingness.

Yet, the rich earth yields its increase to the tiller, and the rain falls, the sun shines, the birds sing, the seasons roll round, and winter's snows are stored away to afford moisture

to the swelling grain, and the growing crops gladden the eye with their promise of plenty. The children shout, laugh, and arouse the somnolent elders with their tumult. Girls and youths who have labored the long day fill the evening hours with song or saunter off in couples.

Now take any human vocation—our own will do—and survey it by itself. Some men have success, some become eminent, some merely hold their own, some fail.

Wherein, then, lies the difference? In work, every time! The man who works hardest succeeds best. I don't mean mere hand-work, or routine work, but work with hands directed by brains; well-considered plans, energetically followed out. That combination is a sure winner.

I've known lots of pessimists. One had been a great merchant, but failed. He lost his nerve, and never tried again. He could spot the weak links in a chain every time and show just why the scheme would fail. Other men with less brain-power took the chances and made good.

One of the most accomplished physicians was incurably pessimistic. Patients respected him, but went to other doctors. He wouldn't venture an opinion or give them any encouragement. Less scrupulous men promised everything, and they generally won out. If they didn't, they left among the family the feeling that the doctor had made a good fight, anyhow—and men like a fighter. My pessimistic friend had the abilities of a DaCosta, but—I'm not sure whether he is alive yet or not—I never hear of him.

Some traveler described this scene: On a steamer there was a bench on which sat ten men, exactly filling every inch. A Turk came up, surveyed the seat, then turning his back he pushed his way to and onto the seat. At one end a man fell off. Then the Turk went on "scrouging" until another fell off; whereupon our Turk squatted squarely on the bench, cross-legged, and calmly began to smoke. Now, if that Turk had been a pessimist, he would have seen there was no room for him on the bench and stood up till somebody made place for him.

Mister Pessimist, you are the fellow who was crowded off that bench.

This is my treatment: I once sat down seriously to consider how I should have arranged this world had I been the creator. O, well, I should leave out sin, disease, and death; I should abolish greed, cruelty, and selfishness. But I soon found that this scheme wouldn't work ut. oFor, with every vice I destroyed I demolished also a virtue; for every difficulty removed, I took away an incentive to exertion. Life became monotonous. meaningless, unendurable—and the thought of this state going on endlessly became appalling. This glorious earth is planted full of the most enticing possibilities, waiting for somebody to discover and develop them.

We may not be Edisons or Madame Curies, but to each and every one of us comes the opportunity to do something worth while. But we can do it only by getting to work; never by sitting down and whining, "What's the use?"

Africa faces a problem. Colonization is impossible where the sleeping sickness prevails. This is due to the trypanosome, transmitted by the tsetse fly from large mammals or "big game," especially the antelope. Ergo, the game harboring the parasite must be exterminated before settlement can be permitted. Query: Which is the Dark Continent to be, the outlet for overcrowded populations, or a game preserve?

AN ENGLISH MEDICAL JOURNAL: A SURVEY

I have before me a copy of *The Lancet*, one of Britain's two great medical journals. How does it compare with the periodicals emanating from the medical profession of our own country? Let's see.

This copy has 78 pages of reading-matter and 82 pages of advertising. It is in its 185th volume.

The first article is an illustrated address on "the degeneration of the neurone in the light of recent research; especially in relation to syphilis and general paralysis." It is scholarly, the bibliography comprises the most recent and valuable publications bearing on the subject; the address is such as a man gives who has thoroughly studied the topic, worked upon it, made it his own, and furnishes a paper from the viewpoint of an expert in that particular subject—such a paper as appears from a man who comes out in print once every five years. This is the impression these English papers make on me.

In our own journals, we are likely to find screeds written by men who have theories to advance, based upon fancy and ignorance, and supported by forced analysis, imperfect observations and illogical reasoning. We have compilations made by men turned loose in a library, without any real personal knowledge or experience worthy the name.

The next article in that issue is by an army surgeon, and it relates experiences with

gonorrhea phylacogen—not altogether favorable. Then there come, in turn, two brief but well recorded accounts of local outbreaks of poliomyelitis; ascites treated by means of multiple paracentesis; polyvalent tuberculin—a new technic; tubal gestation continuing to the sixth month after rupture at the sixth week; the diagnostic value of Abderhalden's method in carcinoma; peracephaliasis in southern Nigeria (22 pages); then follow the departments: clinical notes, 2 pages; society reports, 6 pages; reviews, 7 pages; new inventions, 1 page; editorial, 8 pages; medicine and the law; the London County Council and medical affairs; public health; the services; staff correspondence; obituaries; open correspondence; the national insurance act; finally, medical news. A great deal of this matter is of local interest alone, but there is much of real, practical concern, while the newer advances in European medicine are kept well before the readers.

It seems unlikely that the British doctor can find time to peruse every week all there is printed in this journal, and *The British Medical Journal* as well, if he has anything else to do. Nor would it be worth while for any but a British doctor to wade through all the matter of British interest exclusively. Still, I doubt whether we find many medical publications that give as much really valuable material—valuable to the busy practician—as is to be found in *The Lancet*.

From our study of the London *Lancet*, we may draw a picture of the English doctor himself. His characteristic is dignity. He is about seven feet high—psychically at least—and from the lofty height he occupies he looks down on such sublunary trifles as patients, theories, researches, discoveries, and revolutions. Beyond his utmost ken there may exist such things as fees. His dress, his gait, his deportment are dignified. The gold-headed cane must survive, to occupy his hands. The Prince Albert—why not the surcoat, knee-breeches, silken hose, shoe-buckles, and, of course, peruke?

Thus he stalks down the street, an impressive figure, before whom all idle talk and jesting are suppressed and hats come off. In the sick-room his manner is urbane, condescending or overpowering; the disease has absolutely no room to linger, the patient is crowded into a corner and draws a full breath only after the Doctor has departed. The Doctor, doesn't merely go, he Departs.

How in the living world any ordinary personage ever musters courage to suggest a—fee to this lordly being is a mystery. Such matters must be arranged with his servants. His whole being, accessories and environment are impreganted with the ideal of the Lord of the Manor. He is a faithful copy.

But we strongly suspect he is only a copy. Let him meet with the real thing—the Simon pure, only original John, Lord of the Demesne, and the Doctor shrinks. The ramrod of his spine changes to a wriggling eel and assumes the horizontal. He finds his tongue loosen up, profusely, yet, obsequiously.

Milord—the genuine—playfully pinches the Doctor's ear and whispers in it laughingly, then passes on, leaving the medico speechless with delight. What pride—no, that's too poor a word—only the French *l'orgueil* is good enough to express the state of mind—he displays now as he promenades down the way.

The passive respect with which he was viewed previously changes now to active adoration. Men hunt up long-forgotten bills to pay him; women acquire ailments as excuses to call him in, and deftly, delicately, "speir" as to what Milord communicated to him. This, of course, is a matter of confidence too sacred to be imparted, although the Doctor lets fall some hints of its momentous nature, and may in special instances unbend sufficiently to relate an anecdote illustrating the warm personal friendship existing between him and Milord, or the high esteem in which the latter holds the Doctor's professional acquirements.

And so he goes—a noble figure of a man, a worthy, self-respecting upholder of the Dignity of the Profession.

What was it Milord did say?

Just bend your head lower, that I may whisper it in your ear, really under seal of the strictest confidence. You won't repeat it? Never? Swear it, so help you Mike!

Milord said: "Doc, you solemn old ass, your wig needs a hair-cut!"

THINGS WE SHOULD DISCUSS

There are several things we should discuss in CLINICAL MEDICINE.

First, the automobile: What is the best one for the doctor? What does it cost to run it? Suggestions regarding its care.

Second, the bacterins: We are to have a symposium on this subject in our May number.

Third, spring and summer ailments: Everything from colic to zoster may come under that head. Diarrhea, dysentery, malaria, urticaria, ivy-poisoning, — hordes of other things.

Please "tell us"--in the fewest possible words.

Leading Articles

The Treatment of Typhoid Fever

By J. M. FRENCH, M. D., Milford, Massachusetts

EDITORIAL NOTE.—Last year Doctor French gave us several lectures on active-principle and allied methods of therapy, these being part of a course delivered at an eastern medical school. In this lecture, and several to follow, the course is continued. Other papers will follow in several succeeding issues.

AS A FURTHER illustration of the application of active-principle therapeutics, I shall speak to you today of the rational treatment of typhoid fever. But I do not wish you to understand that there is any recognized method of treating this or any other disease which is limited to the exclusive use of the active principles of plant-remedies. Rather, I desire to call your attention once more to the fact that the use of the active principles in the treatment of disease does not, in itself, make a physician an active-principle therapist; but neither does the use of other remedies in addition prevent his being such.

Indeed, as I have already told you more than once in substance, the active-principle therapeutist as a rule is not a sectarian, or a fad list, or an extremist in any direction. He uses the active principles and conforms to the other fundamentals of the method in most cases, for the reason that he has become convinced that the best results can be secured in this manner. But, in any case where experience or observation or testimony has convinced him that the cure of the patient can best be brought about in some other manner he unhesitatingly departs from the tenets of strict active-principle medication and uses that which to him seems the best method. Not methods, but results, are the things to be sought after.

You will find that typhoid fever does not always present itself in the sick-room as it is pictured in the lecture-room or in the text-book. I once heard a physician say that, although he had been in practice for ten years, he never had seen but one typical case of any disease. By which he meant that he had seen but one case which corresponded closely with the descriptions given in the books. He had learned the lesson that, while the teacher must describe the type, just as the artist must make his sketch a composite picture, yet, in actual life no one case corresponds exactly with the type, no one individual perfectly resembles the composite picture.

The Importance of Accurate Diagnosis

It is not within my province to dwell upon the diagnosis of typhoid fever; your professor of practical medicine no doubt has instructed you carefully in this respect. Very likely he has told you that, while sometimes the diagnosis is easy and can be made early in the disease, it is difficult in others, and much valuable time may elapse before one is quite sure as to the real nature of the disease.

This was true to a much greater degree when I began the practice of medicine than it is today, and, hence, the need of such instruction may no longer be felt. For, by the aid of the methods of modern laboratory diagnosis, the number of uncertain cases is reduced to a minimum. Especially is this true if it is your fortune to practice in or near a large city, where you can avail yourselves of the advantages now uniformly found in large hospitals, you will be able to rely to a great extent upon these methods to aid you in diagnoses; and your results will, without doubt, be far more accurate and satisfactory because of these aids.

And, indeed, you will need to avail yourselves of the latest and best methods which science has placed at your command, in order that you may do your whole duty, meet successfully the sharp competition to which you will be subjected, and bring the largest possible proportion of your patients safely back to health.

But, if, on the other hand, it should fall to your lot to find your work in a sparsely settled country, where you are out of easy reach of the helps of which I have spoken, do not be downcast or discouraged because of these things. There are no advantages without corresponding disadvantages. Always when one end of the seesaw board goes down the other end goes up.

In the country, you will be farther away from help and, thus, will be obliged to depend upon your own resources. But, in compensation, you will develop self-reliance, independence of action, and an all-around versatility that does not characterize the specialist or the laboratory physician.

Therefore, I say, develop yourself according to your opportunities, and you will be able to meet the responsibilities of life as they come to you. And this means that you should gain a thorough understanding of the most improved methods of diagnosis as well as of therapeutics, and that in the treatment of disease you should bring to your aid every means within your reach.

The Old and the New Idea Contrasted

Typhoid fever is a specific disease, and its cause is a specific germ, the typhoid bacillus. The symptoms really are due to the presence of the bacilli in the blood—what might be termed a bacillemia. This condition is found at a very early stage and is continued throughout the disease. The intestinal lesions are centralized in the Peyer glands, but also are found in various parts of the intestinal tract. The glands in question are the site of entrance of the germs, just as the glands of the throat are the site of entrance of the bacilli of diphtheria; in either case the principal lesions existing at the point of entrance.

The fever is the most constant, as it is the most important, of the constitutional symptoms, and is present in virtually all cases, making its appearance at an early stage, often as the first symptom attracting the attention of the patient. Usually, however, the intestinal symptoms are early manifested, and these and the acidemia precede, and they also cause, the fever in every instance.

For the reasons named, remedies directed to the fever itself can not be relied upon to check it as long as the specific germs retain their activity. And, as the removal of the morbific cause is always more important than the treatment of the resulting symptoms, it is even more material that we should strike at the germ than to combat the fever.

A friend of mine, who was graduated from Harvard the year after I was from the University of Vermont, took for the subject of his graduating thesis "Typhoid Fever;" and in discussing the treatment he wrote as follows—this sentiment, he tells us, embodying the substance of the teachings he had received on this point: "The treatment of typhoid fever is devoted to one end, namely, to keep up the patient's strength till the disease has run its course. There is no drug which will lessen, cure or cut short the disease."

This statement has a most familiar sound and calls to mind the similar words of Osler with respect to pneumonia; raising, indeed, the question as to whether Osler took his ideas from Harvard or Harvard and Osler both drank from the same fount of knowledge. Undoubtedly the statement quoted represents the consensus of medical opinion of a generation ago. As for my friend, I am glad to be able to tell you that he has entirely repudiated those ideas and now advocates and practices something quite opposite to these pessimistic notions.

Expectant Versus Prompt Treatment

Perhaps the worst result of these teachings was the state of mind they engendered, leading, as they did, the practitioner of that day to make no endeavor to do anything for a fever, except to watch and wait until the disease was fully developed; and then the symptoms were treated, and the symptoms only, since according to the prevailing theory nothing could be done for the disease itself, either to cut it short, to cure it or even to lessen its intensity.

But, glory be! No such hopeless dogma hampers the action of the active-principle physician. The main desire of such a practitioner is, to get at the disease early—and the earlier the better. He does not even wait until the diagnosis is final and complete before beginning the treatment, but treats the symptoms as he finds them. It is true that he still has difficulty in getting his cases as early as could be desired, but, thanks to his persistent teachings in this respect, he certainly does get called to his patients much earlier than did the fathers.

Right here I want to impress upon your minds this one point, namely, that the most important point, the one thing which more than any other characterizes the active-principle treatment of typhoid fever and of all other acute disease, is *the early beginning of treatment*. This is in strict accord with the principles laid down by Burggraeve, the

founder of dosimetry, who declared that "dosimetric medicine rests essentially upon its power to jugulate those fevers in which all acute maladies have their inception." But only at their start can these maladies be aborted. *Therefore, begin early.*

Now, I do not claim that all cases of typhoid fever can be aborted, or even most of them—in the stage in which they usually reach us. But I do believe in the abortibility of fevers and other acute diseases; and that not merely as an ideal to be aimed at, but as a fact which can be actually accomplished in a considerable proportion of cases. And when we cannot succeed in cutting short the disease by early treatment, we can at least favorably modify the symptoms, prevent dangerous complications, shorten the duration, and lessen the mortality. If I did not believe this much, I should not have the courage to undertake the practice of my profession.

Great Promise in Bacterin Treatment

The vaccine, or bacterin, treatment of typhoid fever is one which promises great results, and although there is not yet a universal agreement as to the degree of its efficiency, from all indications it seems probable that with the further development of the method its value will be increasingly recognized.

As a preventive measure, its importance certainly is well established. Dr. George M. Gould declares that it renders an individual practically immune to typhoid fever for at least two years, is attended by no danger and by practically no inconvenience, and that exhaustive experimentation has proven it reliable. This is generally accepted as true, and it follows that antityphoid vaccine should be used in all epidemics, and also by all persons who are likely to be exposed to infection, such as are travelers in countries where pure water can not be obtained, as also soldiers and sailors in general. Indeed, it is largely through the experience of these latter classes that its value has been established. As a means of treating the disease once it is established, the place of the vaccine is not so firmly fixed, but seems, with each year, to be increasingly recognized. It does not interfere with other medical treatment, and when properly used it seldom does harm.

For these reasons it seems to me advisable, when the diagnosis of typhoid fever has been made, to administer the proper dose of typhobacterin, and repeat the same at proper intervals throughout the course of the disease; meanwhile continuing the usual medical treatment. And here again we see the importance of beginning early; for all authorities are agreed that the earlier this measure is employed, the greater is the benefit likely to be derived from it.

The Essentials of the Treatment

The essential treatment which is relied on by the active-principle physician combines three elements: it is eliminative, antiseptic, and defervescent.

1. The treatment is eliminative, in order that the decaying and septic material in the intestinal tract, and throughout the system, may be removed, so far as possible.

2. It is antiseptic, in order that the entire intestinal tract as also the system in general may be rendered a less fertile soil for the growth and development of the specific germs.

Many sneers, without justification, have been thrown at the antiseptic treatment of typhoid fever, on the ground of the evident impossibility of securing absolute asepsis of the intestinal canal. But no friend of intestinal antisepsis, however ardent, has ever claimed that such a thing is possible.

On the other hand, however, no one has ever shown that the digestive tract, if it is cleared out at the beginning of the disease, and kept reasonably clear of the products of decay, and in addition is saturated and kept saturated with a nonpoisonous antiseptic agent, furnishes as good a soil for the growth and development of the typhoid or any other pathogenic germ as when these conditions are reversed. And this is all that the most enthusiastic friend of intestinal antisepsis ever has claimed.

3. It is defervescent, not only because the fever is a source of danger in itself, but because the rise of temperature is an indication of the severity of the infection; and, if it can be kept at a reasonable point, the danger is greatly lessened.

Remember that each case must be treated on its own merits. The patient himself must be treated as well as the disease, and no two are alike. The symptoms also must guide in the treatment, as showing where the most vulnerable points are to be found, which need the most urgent attention, and to which the greatest care must be given.

There should be no such thing as a routine treatment; still, there needs must be a general plan, but which must be modified as conditions may seem to demand. It is this general plan of treatment which I shall try to lay down, one which is adapted to the average case and can be modified as may be

needed. But, like the doctor who had seen only one typical case, you also may never see but one—or not even one—case to which the treatment I shall describe may seem the best adapted.

A General Plan of Treatment Outlined

The first thing needed is thorough elimination—cleaning out. If the patient is seen early, begin with a tablet containing 1-6 grain of calomel, 1-6 grain of podophyllin, and 1-12 grain of bilein. Give this every half hour for six doses. Two hours after the last dose has been taken give a full dose of a laxative saline. If needed repeat this every two hours until the bowels have been thoroughly cleaned out, ending with loose watery discharges. If there has been a preliminary diarrhea, it will take less to produce this result than when there has been constipation. But the clearing out is needed under either circumstance. As for the dose, the effect is what is needed. If much is required, give much; if little, give little.

When this result has been thoroughly secured, it is time for the next step, which is, to secure intestinal asepsis to the greatest extent possible. Here the agents to be employed, and which experience has shown to be the most effective, the safest, and the most reliable, are the sulphocarbolates of zinc, calcium, and sodium. These salts may be given either singly or, as more often desirable, the three combined. This remedy should be given in doses of from 10 to 30 grains every two to four hours, according to the severity of the attack. It is best given in solution, with a plenty of water. Or the tablet may be crushed or even given whole in some cases, but always with plenty of water to insure ready dissolution in the stomach.

Shaller says in regard to this procedure: "Where the evacuations are frequent and foul, 5- to 10-grain doses of any of the three sulphocarbolates or of the combined intestinal antiseptics not only checks the offensiveness of the stools, but lessens their number. As the presence of the sulphocarbolates in the intestines checks and prevents fermentative action, the high temperature of typhoid fever begins to decline and can be kept down by the administration of these remedies throughout the disease. . . . . Treated on the above plan, typhoid fever will be of shorter duration than usual. Instead of running three weeks or more, patients are frequently up and about within two weeks. If this treatment is begun very early, the probabilities are that very few cases can run their full three weeks' course. Calomel and the sulphocarbolates do certainly abort many cases of typhoid fever."

Abbott writes: "Not all cases pursue an eminently satisfactory course under the antiseptic method; but the severe forms become scarce, the abortive cases frequent, and the disease puts on a milder aspect. The sooner the antiseptic method is put in practice, the more decidedly will its good effects be manifested. If the case is not treated until ulceration has occurred or until the patient's condition is desperate, and the believer in antiseptics is then called on to demonstrate his miracles, failure is probable. The sulphocarbolates will usually prevent the dangerous conditions of the third week, but there are better remedies to promote the healing of ulcers, prevent perforation, and stop hemorrhage; also to combat pneumonia. But when they are given early in the attack, in the manner described, there is little to be apprehended in the way of complications and sequels."

Here again (pardon me for harping so persistently on one string) let me call attention to the stress which is placed upon beginning treatment early. When this is done, the dreaded complications seldom occur, while the doctor will be credited with having had to deal with only a light case of thypoid fever, or perhaps no typhoid infection at all. However, your patient gets the benefit, after all.

The laxative treatment should be repeated in full every few days, and a sufficient dose of saline laxative should be given every morning to secure one or two loose movements each day.

Steps in Combating the Febrile Condition

The next thing to be considered is the treatment of the fever. It should not be inferred, of course, that the institution of this treatment is to be delayed until the eliminatives and antiseptics have accomplished their work; rather, it sometimes is the first form of treatment to be undertaken, and, moreover, always to be begun early. Thus, the different forms of treatment are to be carried on together or the one or the other may have the precedence, according to the symptoms in each particular case.

The principal drugs to be relied upon for this purpose are: aconitine, veratrine, digitalin, and strychnine. It is sometimes objected that the first two of these drugs are sedatives and depressants, while the last two are tonics and stimulants—the two classes seeming to be antagonistic in their effects.

However, you will remember that in a previous lecture I explained the selective action of the cells throughout the system, whereby each cell selects from the general blood stream those things which are needed for its building up, and rejects those which are foreign to its needs; that, while this is true when only enough material for proper nourishment is absorbed, it nevertheless is possible to overwhelm or poison the blood-cells by an overdose, which forces them to take up more than the proper amount; that this rule holds with regard to medicines as well as to foods; and that in this way it is possible to use to the greatest advantage remedies of unlike and even to some extent opposing properties, provided only minimum doses are employed.

Fever and the Vasomotors

Along with this, you will remember the theory of the relation of fever to the vasomotor nervous system, as explained by Doctor Waugh, which was explained in the same lecture as the foregoing. He tells us that "acute inflammatory attacks begin with a disturbance of the circulatory equilibrium. The affected part fills up with blood, which distends the capillaries, whose walls, relaxing under the increased pressure, afford an example of relative vasomotor paresis, being abnormally weak in proportion to the pressure to which they are subjected. But, as there is no reason to suppose that the actual quantity of blood in the body has been increased, this overplus of blood in the distended capillary area indicates that there is too little blood in some other part of the vascular system. In other words, the vasomotor paresis in the hyperemic area is exactly compensated by a vasomotor spasm in some other vascular area."

Now, the normal equilibrium of the circulation in these cases may be restored in either or both of two ways: by increasing the tonicity of the dilated vessels or by causing those which are contracted and comparatively empty to relax and dilate, or by both acting together. But, this is just what we undertake to do in the treatment of fever by the methods that are adopted by the active-principle medicationists. Contraction in the dilated areas is secured by means of the vasomotor tensors, strychnine and digitalin; and relaxation in the contracted areas is obtained of the vasomotor relaxants, aconitine and digitalin. By either of these means, but best by both carried on together, the restoration of circulatory equilibrium is secured—and this is the great object to be attained.

The basic prescription for fever, therefore, would consist of aconitine and digitalin. Aconitine inhibits the rapid action of the heart, slows and regulates the pulse, lessens the vascular tension, and lowers the temperature. Digitalin also inhibits the action of the heart, which it slows and strengthens, meanwhile restoring vascular tension where it is wanting. To these two agents, Burggraeve added strychnine, which is the most powerful vital incitant we possess, energizing every organ and function of the body, and especially combating that tendency to weakness and debility which is common to all febrile diseases and increases with each day of their continuance. This happy combination of drugs is known as the dosimetric trinity, and is especially adapted to the asthenic forms and stages of fever.

To the basic prescription of aconitine and digitalin, Abbott added veratrine, constituting what is known as the defervescent compound. This addition of veratrine increases the inhibitory power of the combination, slows the pulse, and opens every door of elimination, so that it is one of the most effective agents for the removal from the body of the various toxic products, whether of infectious agents, morbid metabolism or from absorption from the alimentary canal.

When Aconitine, When Veratrine?

As an agent in the treatment of fever, aconitine is the preferred remedy in children, in ephemeral fevers, and in the earliest stages of fevers in asthenic forms. Veratrine is the remedy of choice when the case is sthenic in its nature and the pulse full and bounding. But when the patient is debilitated, markedly asthenic or the disease is one which in its ordinary course leads to great weakness and debility, especially heart weakness, then the trinity granule of aconitine, digitalin, and strychnine is to be used from first to last. But in a disease like pneumonia, when it is desired to secure quick results and the patient is plethoric and full-blooded then the defervescent granule is the thing.

Furthermore, in the different stages of the disease, we often change from the one to the other combination as the symptoms may change. Moreover, when it is especially important to reduce the fever quickly in a patient who has a good heart and is not debilitated, this result may be obtained by the use of the coal-tar products acetanilid or acetphenetidin more quickly, although with greater danger and less permanently, than with the defervescent alkaloids.

Remember that the doses of the tonic alkaloids, strychnine and digitalin, are not such as to stimulate powerfully, not such as to serve as a whip to the tired horse, but rather such as to afford proper support and prevent exhaustion of the vital forces. Much can be done by the proper use of these remedies to prevent the more dangerous complications and sequelæ which under other circumstances often make their appearance and sap the vitality of the patient.

The trinity granule may be given with safety every hour as long as may be needed. The aim should be to keep the temperature below 102 degrees or as little above that figure as possible. And when the fever is gone, and the aconitine, therefore, no longer is needed, while support for the heart and nervous system is still indicated, then drop the single granule, and substitute in its place the granules of strychnine and digitalin, every hour or two hours for as long as may be needed.

I believe that this treatment, thus briefly outlined, is superior to any other with which I am acquainted for the essential fever process under whatever circumstances occurring. Of course, other agents may be added as indicated, and other methods may, in rare instances, be preferred. It is, however, a method simple, easy of application, and satisfactory in result to a greater degree than any other I have ever made use of.

We now have considered the medicinal treatment of typhoid fever under the four heads of bacterial vaccines, eliminative treatment, antiseptic treatment, and antiphlogistic, or febrifuge, treatment. It remains to consider the general care of the patient.

General Management of the Typhoid Patient

From the onset of the illness, the patient should be confined to the bed, which when possible should be in a large, well-aired and pleasant room. No room in the house is too good for the sick-room. "Walking cases" of typhoid fever, so called, are proverbially dangerous; the danger arising largely from the exposure and undue exertion necessarily involved as well as from the lack of proper care in other respects. Strict cleanliness should be observed in all things. Disinfection of the room itself, the bed, bedding, and all the clothing, as well as of the discharges, should be scrupulously carried out. Many agents are used for this purpose, but perhaps no single one better meets the requirements in most instances than chloride of lime.

It is the practice of most physicians to restrict the patient to a liquid diet during the continuance of the fever. This may include milk, rice- and barley-water, fruit-juices, bovinine, beef-juice, white of egg, malted milk, and so on.

Baths should be administered both for cleanliness and for the comfort of the patient. They may be hot, cold or tepid, according to the judgment of the physician or the desire of the patient. The use of cold baths to control the fever is highly recommended by good authorities, but as a matter of fact, they are better adapted to institutional work than to private practice, and have never been as much used in this country as in Germany.

Aiding the Defense

Nuclein may be used with advantage to strengthen the defensive forces of the system, and echinacea to aid in bringing about systemic asepsis. In the severer forms, and especially where treatment is begun late, baptisoid sometimes is a valuable remedy. The special indication for this drug is a brown or purplish discoloration of the tongue and mucous membrane of the mouth, with a congested face and deep-red tongue. Quinine arsenate sometimes is desirable for its tonic effect. Caffeine acts as a valuable diuretic and brain and nerve stimulant. Codeine may be needed to quiet irritated nerves and induce sleep. In exceptional instances, morphine, hypodermically, may be required for the relief of severe pain. In the active-principle treatment of typhoid fever there is no place for alcohol.

When ulceration has occurred and serious symptoms are present—usually about the third week—threatening perforation, oil of turpentine is the standard remedy. When this is given in 5-drop doses every two to four hours, in capsule or in an egg emulsion, it is a usual thing to see the tympanites quickly subside, the tongue become moist, and the stools assume a healthier character.

For hemorrhage, the best remedies are: ice to the abdomen, silver nitrate in small doses up to 1 grain in a day, and atropine hypodermically, in 1-100- to 1-50-grain doses and repeated so as to keep the blood at the surface. Emetine hydrochloride, in 1-2- to 2-3-grain doses, hypodermically, has recently been advised for the treatment of hemorrhage and deserves a careful trial.

Perforation of the intestine is perhaps the most dangerous of all the complications and calls for the prompt opening of the abdomen and resection of the diseased portion of the intestine. But when the case is treated anti-

septically from the start perforation seldom will occur. The same is true of the various other serious complications.

I feel that I ought to ask your forbearance for so constantly iterating and reiterating, with what must seem persistent and needless frequency, the laws of active-principle therapeutics—to which, you may think I have been paying more attention in this talk than I have to the treatment of typhoid fever. The reason is, that I am not teaching you the practice of medicine, for I know that you will get better instruction from your regular professors than I could give you if I were to attempt it. What I am endeavoring to do is, to impress upon your minds, in a way to last for the rest of your lives, the more striking features of a method of therapeutics which is comparatively new to most of you and concerning which you look to me to tell you more than you will be likely to get from anyone else in your present studies.

Lavage of the Bladder at the Bedside

By BENJAMIN H. BREAKSTONE, B. S., M. D., Chicago, Illinois

Professor of Surgery, Bennett Medical College, Medical Department Loyola University; Attending Surgeon Maimonides Hospital; and at the Jefferson Park Hospital

EDITORIAL NOTE.—Doctor Breakstone has promised us several more of the interesting articles upon "Every-Day Surgery" which were such a feature in CLINICAL MEDICINE *several years ago. This is the first of the new series. Ultimately they will be reprinted in book form. This is surgery of a kind that every doctor can understand and use.*

IN THIS paper I wish to outline my method of washing out the bladder, one that can be employed anywhere in the ordinary sick-room. No elaborate apparatus is called for, and every article may be obtained in any rural drugstore, or even the country general store. These are as follows: A catheter, a glass funnel, a graduated glass container, a glass tube, a rubber tube, and an irrigation solution.

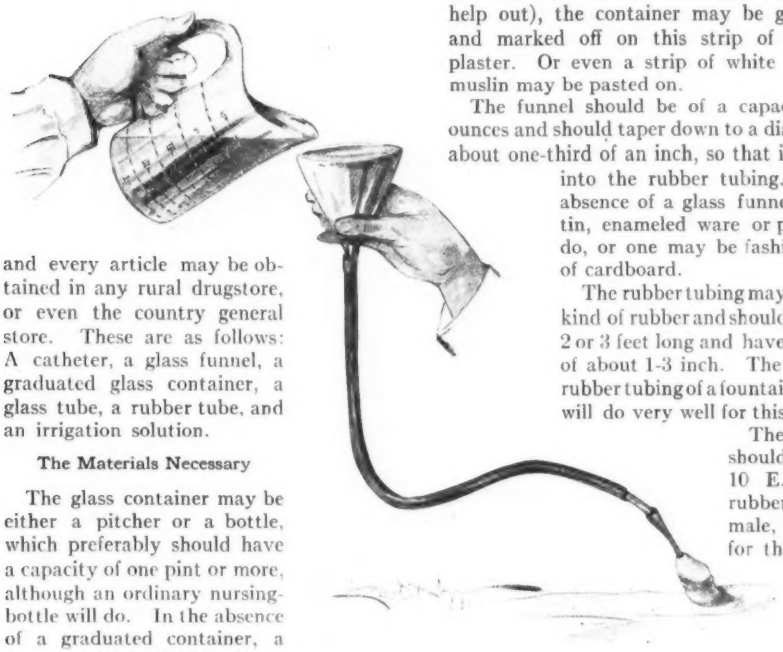
The Materials Necessary

The glass container may be either a pitcher or a bottle, which preferably should have a capacity of one pint or more, although an ordinary nursing-bottle will do. In the absence of a graduated container, a narrow strip of adhesive plaster may be put on the outside of any glass vessel, extending from the mouth of the container to the bottom, and with the aid of an ordinary milk-measure or any other measure, such as is found in any average household (even small medicine-bottles may help out), the container may be graduated and marked off on this strip of adhesive plaster. Or even a strip of white paper or muslin may be pasted on.

The funnel should be of a capacity of 4 ounces and should taper down to a diameter of about one-third of an inch, so that it may fit into the rubber tubing. In the absence of a glass funnel, one of tin, enameled ware or paper will do, or one may be fashioned out of cardboard.

The rubber tubing may be of any kind of rubber and should be about 2 or 3 feet long and have a caliber of about 1-3 inch. The ordinary rubber tubing of a fountain-syringe will do very well for this purpose.

The catheter should be size 10 E. and of rubber for the male, but glass for the female.



Dr. Breakstone's Method of Washing Out the Bladder

The solution most frequently used is the saturated solution of boric acid; others are those of potassium permanganate in strengths from 1 : 1000 to 1 : 10,000, and of mercury bichloride, 1 : 5000 or weaker.

The Technic of the Method

The patient should be lying either on the bed or on a table, and by percussion we should first ascertain the amount of fluid in the bladder. The apparatus having been sterilized, either by boiling or by soaking in hot saturated solution of boric acid for some time, the external genitals of the patient are then rendered aseptic in a thoroughly surgical manner; so also are the operator's hands. Now the parts of the apparatus are connected carefully, avoiding contamination.

If the bladder is empty, the apparatus is filled with the solution to be used, before the catheter is introduced into the bladder. This prevents air from entering the bladder through the apparatus. If a rubber catheter is used, as is the case in the male, vaseline or other oily lubricant should be avoided, as oily substances attack the rubber. Therefore, glycerin or a glycerin plasma is used for this purpose. If the bladder is fairly full, the catheter may be introduced first, when the urine contained in the bladder will expel the air contained in the tubing. However, it is always much safer first to fill up the apparatus before introducing the catheter into the bladder.

The patient, under circumstances, may assist the operator in holding the catheter in place after it has entered into the bladder. Then, with his left hand on the funnel, the operator may handle the container with his right hand and pour in the solution. The patient is the best guide here as to the amount, for he knows when his bladder is overfilled and can so inform the operator.

Advantages of the Method

The advantage of this simple apparatus is that by raising or lowering the left hand holding the funnel the degree of pressure may be regulated at will. Furthermore, through the glass tubing connecting the catheter with the rubber tube we may see what goes in and what comes out of the bladder. The bladder may be emptied repeatedly and rewashed until the solution comes out clear. We can also see whether the solution is changed in color, transparency or density. By raising and lowering the funnel, we fill and partially empty the bladder as though we were washing a bottle with our thumb on the opening and letting water run in and out of it. We can also measure with this apparatus the amount of solution used and therefore can also ascertain the capacity of the bladder.

This entire operation is absolutely painless. I have been using this apparatus for more than sixteen years and prefer it even in my office, on account of its convenience, its compactness, and the ease with which it may be sterilized.

THE LOST DAY

By GRACE G. CROWELL

To night I know that I have lost
Somewhere between the far sunrise
And this the dark, a jeweled day
That God had given me to prize.
I lost it, for I failed to note
The tender beauty of the dawn,
I failed to breathe the sun-drenched flower.
Before the sweet, wet dew was gone,
I failed to turn my cheek to catch
The cooling breeze I needed so;
I did not pause to note the while
How wondrously the new leaves grow.
For all the day was full of cares,
I only looked me down to see
The briars that beset the way
To hold and fret and hinder me.
But now tonight, O Lord, I lie
And see with weary, world-tired eyes
The tranquil splendor of the night,
The wonder of thy lighted skies,
And know some better thing is mine
Than this lost day,—and I will go
No more forgetful of Thy way
Nor walk no more with eyes cast low,
But looking,—live and laugh and sing,—
Knowing Thou would'st have it so.

The Treatment of Syphilis

As Modified by Recent Advances in Therapy

By G. FRANK LYDSTON, M. D., Chicago, Illinois

Author of "Diseases of Society," "Genitourinary, Venereal, and Sexual Diseases," "Sexual Hygiene for the Male," etc.

[*Concluded from February, page 132*]

Syphilis of the Viscera, the Brain, and the Nervous System

The treatment of syphilis of the viscera is, in general, the treatment of constitutional syphilis. Certain special organs and structures require particular consideration, because of the importance of their function and the delicacy of their structure, which make it urgent to remove the syphilized cell infiltration and correct the local syphilitic toxemia as quickly as possible.

The reason for this is obvious—the more extensive the cell deposit, the severer the local intoxication; and the longer the process is allowed to continue, the greater the resulting nutritional damage, and the greater the amount of cicatricial deposit sequential to the syphilitic lesion.

In all lesions of the cerebrospinal axis, the system should be brought under the influence of mercury as quickly as possible—this irrespective of whether salvarsan is used or not. Where the use of salvarsan and mercury can be combined, rapid remedial action is doubly certain.

Mercury may always be given intravenously in emergencies. If the practitioner is not familiar with this method, intramuscular injections are safer, and act quite rapidly when the drug is rapidly pushed to the point of tolerance.

When the case is not urgent, inunctions give the best results. In urgent cases of brain and cord syphilis, salvarsan also is indicated. The difference of opinion as to its safety in such conditions sometimes should have little weight, because matters are so serious that the patient has everything to gain and nothing to lose from the administration of the drug. If matters be urgent, the intravenous method may be employed. Where delayed and less immediately powerful action is warrantable, the intramuscular method should be employed.

In the author's opinion, the objections offered to the use of salvarsan in syphilis of the brain, cord, and retina apply chiefly to the intravenous method.

Syphilis of the retina is best treated with mercury by the intravenous method. Salvarsan is not contraindicated, in early cases, in the author's opinion, if used intramuscularly.

In all cases involving the eye and ear or nasal cavities, it is wise to have the cooperation of a competent specialist, who not only can advise as to the local physical condition, but also as to the progress of the case under treatment. Special skill also often is required for the local management of the case.

Locomotor ataxia in its incipiency occasionally apparently is cured by mercury and iodine, supplemented by mercury. Late cases, also, are benefited in a small proportion of cases.

The author will not discuss the efficacy and safety of salvarsan in tabes, but will merely ask this question, viz.: Where the diagnosis is clear, what is there to lose by a radical attack on the disease with all the therapeutic weapons at our command?

The author believes that he has seen an occasional cure and many cases where the disease apparently has been checked by vigorous treatment. The trite argument of spontaneous remission of the disease will, of course, be advanced here, and the author will admit its cogency in general, always providing it be not allowed to suggest a policy of dilatoriness in the management of the disease. I do not object to any sort of theory that does not conflict with the best interests of the patient.

Syphilis of the Kidneys

Syphilis of the kidney requires special mention, on account of the danger incurred by the use of salvarsan.

The intravenous administration of mercury probably is safe in renal syphilis, but it is wiser to use the drug by inunction or intramuscularly, until the renal condition has cleared up. Albuminuria is not infrequent in syphilis. It usually is charged up to the treatment; but, in my opinion, this rarely is justifiable.

The brilliant success sometimes obtained in the treatment of supposed "Bright's" by

antisyphilitic treatment is very suggestive. The author has met with cases of this kind that would have been a useful object-lesson for the therapeutic nihilist, as well as for the physician who underrates the etiologic importance of syphilis in renal disease.

Iodide of potassium in increasingly large doses, carried to the point of physiologic tolerance, is useful in syphilis of the nervous system and viscera. It meets the indication of breaking down, removing, and eliminating the syphilitic newgrowths and eliminating syphilotoxins.

With increasing knowledge of the action of salvarsan, large doses of iodides will be less popular. Whether iodine or salvarsan be used, however, mercury should be the mainstay of treatment. It is permanently curative in action, the other drugs being emergency remedies, and useful in meeting temporary indications.

Brain and visceral complications are infrequent where syphilis is thoroughly and conscientiously treated, and for a proper length of time. With salvarsan and the intravenous method of administering mercury, employed in the incipiency of the disease of the special structures, the prognosis of such special syphilitic involvements should be far better in the future than it has been in the past.

Syphilis of the Genitalia, and Other Localizations

In syphilis—secondary and tertiary—of the sexual apparatus, of either sex, it is very essential to prevent destruction of tissue by prompt and effective constitutional treatment. Great care should be exercised in suspicious growths or uniform enlargements of the testes. Syphilis of the testes often is mistaken for malignant disease. In doubtful cases, salvarsan and mercury should be given. What has been said of the testes applies equally to the female genitalia.

Bone-Syphilis should be treated like any other form of lesion. Surgery, however, often is necessary to supplement our strictly medicinal therapeutics. Patients sometimes are dosed to the very verge of the grave, in the irrational attempt to cure carious and necrotic bone lesions in which operation, as a supplement to drugs, would achieve most brilliant results.

Severe osteal or periosteal pain often may be relieved and bone-tissue saved by incision into the periosteum or even into the bone itself.

Salvarsan is of especial service in bone-syphilis, enabling us to save bone which otherwise would be lost. It is of signal service in cases where the injudicious action of mercury is suspected or known to be an etiologic factor in the bone lesion.

Congenital and Infantile Syphilis

The remedies for congenital and infantile syphilis are the same as for the acquired and adult forms of the disease.

Great care is necessary in children where salvarsan is used. The intramuscular method is best, small doses being used. The dosage in general should be apportioned to the age of the child, just as would be the dosage of any other drug.

Mercurial inunction probably will continue to be the simplest and most reliable method of treating syphilis in children, salvarsan being used as an adjuvant.

The gray powder, hydrargyrum cum creta, is as useful now as before salvarsan was introduced, and probably will always be one of our most valuable remedies in syphilis in women and children, because of its satisfactory action and the tolerance of the preparation exhibited by the most delicate stomach and bowel. The administration of mercury, salvarsan, and particularly of iodide of potassium by the breast-milk of the mother, to whom full doses of these drugs may be given, is one of our most useful therapeutic resources in syphilis in small children.

The treatment of parasyphilis is that of definitive syphilis.

As our means of diagnosis are not infallible, and it often is difficult to say where active syphilis ends and parasyphilis begins, it is well not to split therapeutic hairs when the question of treatment comes up.

Local Treatment of Syphilitic Lesions

The treatment of chancre has already been considered. Gummata may require excision or curettement. Necrosed bone should be removed and carious surfaces scraped. Ulcers may require curetment or cauterization.

The following is an excellent application for ulcerative and squamous syphilides:

Hydrargyri bichloridi	grs. 20
Tinct. benzoini compositæ	oz. 1

Collodion or celluloid cream may be used in lieu of the benzoin tincture. The proportion of mercury may be increased or decreased.

Pure tincture of iodine and finely powdered iodoform often are of great service in syphilitic ulcers.

Mucous patches demand freedom from irritation. Smoking and chewing are especially

injurious and often responsible for mucous lesions of the mouth and throat. The best remedy for mucous patches is acid nitrate of mercury, lightly applied. This remedy sometimes is of great service in skin lesions. Iodine also is useful in mucous lesions. The tincture should be used. Pure tincture of iodine is useful also as an application to the gums in mercurial stomatitis.

32 N. State St.

The Medical Treatment of Appendicitis

By RAOUL L. VIORAN, M. D., Chicago, Illinois

EDITORIAL NOTE.—Here is a novel therapeutic idea. Whether you agree with Doctor Vioran or not you will want to understand his plan. It will set you thinking.

IT MAY seem presumptuous, in view of the prevailing opinion of the medical profession, even to suggest that there are cases of appendicitis in which medical intervention is to be preferred to surgical operation; yet, I shall take the risk of being anathematized by my surgical brethren and submit a method of medical treatment, in these cases, which I frequently have found valuable in the treatment of appendicitis. I believe there are many cases, when they can be accurately diagnosed, in which the complete subsidence of all symptoms can be insured and a clinical cure obtained without recourse to surgical measures.

While I cheerfully acknowledge that surgery has done much to reduce the percentage of deaths from appendicitis, it should not necessarily be assumed that every form of medical treatment is useless. If we eliminate the infantile cases of appendicitis in which the diagnosis is doubtful, the infectious cases of appendicitis due to typhoid fever, influenza, scarlet-fever, and so on, the traumatic cases, and the secondary appendicitides due to disease of the uterus, fallopian tubes, and ovaries; if we eliminate, finally, those produced by the inpaction of foreign substances within the appendiceal canal, there still remains a large number of cases characterized by preceding or coexisting gastric disturbance, such as constipation, hyperchlorhydria, distention of the stomach, or a tendency to fermentation.

Anent the Etiology of Appendicitis

According to a theory largely held in France, and which seems to the writer scientific as well as sensible, the etiology of this class of cases can be summarized as follows:

The chyme, when it leaves the stomach, has an acid reaction, due to the presence of hydrochloric acid. Upon entering the duodenum, this acid secretion, through its hormones, causes a stimulation of the secretions of the pancreas, liver, and Brunner's glands. These secretions, when brought into the intestine, neutralize the acid chyme and stimulate the activity of the intestinal ferments; these ferments being active only in an alkaline, neutral, or slightly acid medium.

When this flow of alkaline secretions is insufficient, the intestinal ferments are inactive and the intestinal mucosa is irritated by contact with the acid of the stomach, a protective mucous secretion is thrown out by the mucosa, and the condition results which, in exaggerated form, is known as mucomembranous enterocolitis.

Moreover, the food-material remains undigested and accumulates in the cecal and iliac fossas, producing, primarily, obstruction, and, secondarily, an inflammatory reaction, one consequence of which is the disease we know as appendicitis.

And furthermore, in this condition of intestinal irritation and indigestion, if the stools be examined, we find that, instead of the three or four percent of nitrogen normally found, the quantity is increased to ten or twelve percent; in other words, there is an accumulation of nitrogenous material in the feces, material that is known to be putrescible and toxic. In addition to this, the fecal mass will be found to contain a large quantity of insoluble mineral salts, often in the form of deposits of intestinal sand, this quantity often reaching as high as thirty percent of the salts ingested.

Such a condition necessarily must result in the production of decided intestinal irritation, especially in the cecal region. As an illustration of this tendency, it may be said that in 1600 cases of gastric disturbance such as we have described, 83 cases of appendicitis occurred, or more than 5 percent.

In résumé, the etiology may be summarized as being due to: (1) hyperesthesia to the

irritating toxic substances resulting from gastric hyperacidity; (2) to the large quantity of mineral matter, mixed with fecal matter, stagnating in the cecum; (3) to the calcareous infiltration of the appendiceal mucosa, with occlusion of the appendiceal canal by inflammatory infiltration of its submucosa.

Microbic infection is to be considered as secondary; and only in cases in which it actually does occur should recourse to surgical intervention be considered as absolutely essential. In other words, every case in which there are no signs, subjective or objective, of microbic infection, is a medical one and will respond to rational treatment of a specific character.

Treatment at the Critical Period

Now as to the treatment of the appendiceal crisis, that can be summarized in Dieulafoy's classic epigram: "Absolute rest; liquid diet; the ice-bag."

Opium should be rejected as dangerous, since experience teaches us that it tends to immobilize the intestine, thereby increasing the stagnation and retention of toxic and irritating waste in the cecal region; and because it also interferes with the establishment of a correct diagnosis.

In the light of the etiology of these cases, and in marked contrast with present-day teachings and practice, I advocate the use of purgatives in suitable cases. Properly given, purgatives never have failed me, neither have my patients succumbed. And for this purpose I prefer calomel, in 1-grain doses every hour until six doses have been taken. In milder cases (those in which the constipation is not marked), I use castor-oil, prescribing it as follows:

Extracti belladonnæ	gr. 1-6
Olei ricini	oz. 1

This is to be taken at a single dose. The extract of belladonna renders the action of the castor-oil less severe.

After the bowels have been emptied—and not until then—I apply the ice-bag to the abdomen. Then, when the bowels have been thoroughly evacuated, I direct the patient to take the following, which is to be used when there is the slightest gastric or abdominal pain or even a feeling of pressure:

Codeinæ sulphatis	gr. 1-6
Calcii carbonatis precip.	grs. 8
Bismuthi subnitratis	grs. 8
Sodii bicarbonatis	grs. 15
Sacchari lactis	grs. 30

This makes one powder, the entire powder to be taken at one time. Such a dose may be given every hour for as long as is necessary.

In cases in which the purgative has no produced the desired effect or the emptying of the bowel is retarded, I order a high colonic flushing; using for this purpose one quart of water at a temperature of about 100° F., to which I add from 5 to 6 drops of tincture of belladonna [Why not atropine?—Ed.] and 1 ounce of olive-oil. When there is no intestinal spasm, but atony, I substitute, for the belladonna, tincture of salvia, using about 10 or 12 drops.

It is important that the enema be not given under high pressure or too rapidly. I instruct the attendant to elevate the fountain-syringe not more than eighteen inches above the bed level and tell him to administer the injection very slowly and with great care. The rectal tube must be of soft rubber, perfectly clean, well oiled, and introduced as far as possible.

I have also found it useful in many cases, before applying the ice-bag, to anoint the right lumbar and inguinal region with the following unguent twice a day:

Etracti belladonnæ	15.00 (oz. ½)
Uxnguenti hydrargyri	45.00 (oz. 1½)

In cases in which the above instructions have been carried out carefully, yet, in spite of them the patient experiences sudden and severe pain, either constant or intermittent, I prescribe the following:

Codeinæ sulphatis	grs. 1 1-2
Extracti gentianæ	drs. 15

Make into 10 pills. Directions: Take one pill every four hours, as necessary.

When there is a protracted constipation and the purgative has failed or if small hard scybalæ follow the flushing, I keep up the enemas (one every six hours) and discontinue the administration of purgatives by the mouth.

The physician should always give close attention to any rise of temperature. Usually this will subside after the thorough evacuation of the bowels. However, should the high temperature persist for more than twenty-four hours after free bowel evacuation and give the patient discomfort, it is advisable to administer a deep hypodermic injection of 10 Cc. of metallic-silver ferment, rendering this isotonic, at the time it is to be injected, with 1 Cc. of a 7-10-percent sodium-chloride solution.

As long as the patient has the slightest sensation of pain or discomfort in the appendiceal region, even though the fever has entirely subsided, he should remain in bed, to insure absolute rest, and the same strict discipline maintained as to liquid diet and

ice over the right middle and lower quadrant of the abdomen.

When all the symptoms have disappeared, I put the patient on a milk diet, increasing the quantities daily. This diet I continue for ten to fourteen days, and then begin to allow gruels, soups, and the usual semiliquid foods; gradually changing from these to a solid diet, but instructing the patient to eat as little meat as possible and to use more vegetables, fruits, and pastry.

To keep the intestines in a normal condition and bring about a gentle but, yet, regular bowel evacuation, I prescribe

Sodii sulphatis	dr. 1
Sodii phosphatis	dr. 1
Sodii bicarbonatis	drs. 2

M. for one powder.

Sig. Dissolve the entire powder in one quart of boiling water and give a wineglass three times a day. This mixture should be sipped, one wineglassful being taken upon rising, one after lunch, and the third upon retiring. Before using it, the bottle should be warmed by dipping it in a vessel of hot water. If one glassful at a dose does not give the desired results, the amount should be increased. If diarrhea should follow, the quantity is to be reduced. The regular evacuation of the bowels is one of the most essential elements in the treatment of appendicitis.

The patient must be kept under surveillance for weeks or months after such an experience, according to the severity of the attack and the response of the condition to treatment.

In advising surgical measures, I am guided by three indications; namely: Operation should be resorted to (1) in case of relapse; (2) in complicated appendicitis, that is, when there is abscess, peritonitis, septicemia or any condition unamenable to medicinal therapy; (3) when the patient is not in a condition to carry out the instructions given him for his behavior during or subsequent to the attack, whether this inability be due to indifference, occupation or financial resources.

Surgery has its proper role in the treatment of appendicitis and it should be resorted to as soon as medicine has proved its futility or the physician has detected indications of imminence of danger. Yet, in all modesty and with a seriousness that is based upon a large personal experience, I am one of those who believe that appendicitis as a rule is a disease to be treated by the internist, and that cases of this kind are to be handed over to the skilled surgeon only after medicinal treatment has shown that it is of no avail.

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[The ideas presented by Dr. Vioran are most interesting. If he would replace his galenic preparations (belladonna, for instance) with alkaloids and bring out strongly the value of intestinal antiseptics in these inflammatory conditions of the ileocecal region, we would be pretty nearly in accord.—ED.]

Some Fallacies in Regard to Contagious Diseases

By JAMES E. STUBBS, M. D., Chicago, Illinois

EDITORIAL NOTE.—Doctor Stubbs is a good deal of an iconoclast, but his iconoclasm is so strongly saturated with common sense that it is hard to escape from his conclusions. The problem that he raises is this: Is our present method of combating the spread of the contagious diseases founded on sound scientific reasoning, or is it the survival of an old superstition? What do our readers think? We want their opinions.

(*Continued from page 154, February issue*)

How Is Cerebrospinal Meningitis Conveyed?

THERE is another disease—when in a malignant form, dreaded by physicians and laymen alike—which gathers to its credit in the cities of the silent majorities its thousands; I refer to cerebrospinal meningitis. Whence cometh it, and how propagated and disseminated? Again I quote from *Progressive Medicine:*

"In cerebrospinal fever, I have never known of a case carried in fomites from one person to another." We, the genus homo, are the reservoirs of the disease. It is with us and in us, there it propagates and multiplies as its natural habitat. "Meningococcus has never been found outside of the human body, apart from culture or in experimental animals, and it is highly probable that the only habitat is the human body. It probably multiplies in the human body and lives but a short time when separated from it." The same may be said of nearly all of the cocci and bacilli that are pathogenic.

It is quite probable that the site of infection is the nasopharynx. This is inferred from the common occurrence of the meningococcus found in that locality in the early stage of the disease, because it has been demonstrated at this point in carriers.

"That which cometh out of the mouth this defileth man."

"The source of infection would seem to be: (1) those individuals who are suffering from cerebrospinal fever, and (2) the carriers, the human reservoirs. It is quite possible that the pathogenic organism is transmitted from one person to another by such contact as ordinarily occurs between people together; that is, by transferring secretions by kissing, by the use of the handkerchief or towels, the soiling of the fingers with the secretions, and so on." (*Progressive Medicine.*)

Some are more susceptible than others to diseases; just why, is unknown at the present time. It may be that the opsonic index is better in one than in another. Two are working in the field, one is taken, the other left. Why? It is impossible to control diseases unless you know where the reservoir is located. If that is the human body, how are you going to destroy it?

There has been no new germination since creation began. John Tyndall, the scientist, said, forty years ago, "There is no such thing as spontaneous germination." The germs of scarlet-fever can not produce measles nor any other disease. "Every disease has its distinct individual germ, and the scales of measles do not seem to be infectious at all, and the same may be said about scarlatina. When convalescence sets in, there is a marked reduction, if not total loss, of infectivity from the nasal and mouth secretions." (*Progressive Medicine.*)

As the human body seems to be the reservoir of scarlet-fever, measles, cerebrospinal meningitis, poliomyelitis, and so on, little is accomplished by closing schools, churches, and public gatherings, for as soon as all the susceptibles, or nearly all, have had the affliction the disease declines, and when spring comes, then rubeola, variola, varicella, scarlet-fever, whooping-cough, mumps, meningitis, and so on, are stamped out until a *new* crop of susceptibles grow up to have the disease and get immunity from further molestation. Thus it has been for all past time, and, so far as scientific proceedings are concerned, it will continue in the future, *ad infinitum.*

Poliomyelitis, if it is caused by the bite of the stomoxys calcitrans, i. e., the stable-fly, and the fly gets the virus from the horse, then the horse must be the reservoir. Kill all the horses, and that ends poliomyelitis. Bad job!

But I have serious doubts as to the stable-fly being the carrier or the vaccinator, as I have met these pestiferous little flies in very many different places a long way from the stable or horses, have been bitten by them times without number, and also have seen my boy friends and adults bitten by them, and as yet have never seen a case of that disease nor have I ever heard of a case among those who were bitten by those little pests. I think we shall have to look further for the reservoir and the carrier.

We are too apt to accept statements made by some research-worker or some shining light in the medical profession, as absolute facts and unchangeable, when they are only giving an opinion, which opinion always is subject to a revision or to being entirely discarded. We, all of us, do not examine for ourselves as we should before swallowing such matter at one gulp. Just wait a reasonable time to have these ipse-dixits verified by experience. Do not chase after flash-lights, ignis fatuuses or fire-flies; for, if you do, you frequently will find yourself in dismal swamps.

The virus of poliomyelitis has been found in the secretions of the mouth and intestines of convalescents and healthy individuals.

"The fact has been established that in man the nasal mucous membrane is the site of the ingress and egress of the poliomyelitis virus." (Flexner.)

To the uninformed and superstitious, the bogeyman stands behind the big red card tacked up on the front or main entrance of our domiciles.

Whence Comes the Spotted-Fever?

The once mysterious mountain-fever has been traced to the tick, a pest of the bovines; so, also, the spotted-fever. When the Lord sent all manner of flies, and lice and bugs, to afflict the Egyptians, he should have sent the tick and the tsetse-fly also; that would have made them repent in haste or be wiped out of existence.

Now, where is the reservoir from whence these insects get their poison? According to Colonel Bruce, in the case of the tsetse-fly, this gets it from the blood of some animal that is infected with trypanasoma. Probably the same holds good in relation to the tick in this country.

Now, the bites of these insects are absolutely

of no effect on man or lower animals until they themselves become infected. But whence the infection? Where stored? Where is the reservoir? That there is one, cannot be doubted. There is no such thing as these germs starting *de novo*.

The higher animals, including man, are the reservoirs. Man becomes infected (how?) with the germs that the mosquito sucks into his stomach, and then these germs undergo a change or development, so that when they are injected by the mosquito into the blood of an unimmune man or mammal, there is developed, by natural process, the condition of yellow-fever. The same holds good in malarial fever; only the plasmodium malaria does not immunize the individual so as to protect him from further attacks. The same process takes place in "neguna," or sleeping-sickness. The tsetse-fly taps the reservoir, which, in this case, are the quadrupeds of Africa.

Perhaps some of our roving nimrods will bring us a few tsetse-flies in their clothing or baggage, and then they will start some reservoir among us by inoculating our bovines.

Our Epidemic of Scarlet Fever

Germs must be alive to propagate their like. Who or what are the carriers in these suppressed diseases? Just now we are having cases of variola. Whence cometh it? Surely, you can not give that which you do not have. Also, we are having an epidemic of scarlatina and of rubeola. These diseases were not prevalent in September, 1912, in anything like an epidemic. Now, why should scarlet-fever appear suddenly in December, 1912, as an epidemic? For it has been in all parts of the city of Chicago. There must be a reservoir, or reservoirs, somewhere, for there is no such thing as spontaneous germination. No germs *de novo*—then the virus of these diseases must be dormant somewhere.

Every case of scarlatina begins with a streptococcus throat infection. It may be very mild or be severe. If the former, then the skin rash is mild; if the throat is badly inflamed, then there is a rough, red skin and kidney involvement. Streptococcus sore throat, laryngitis, starts in a family, and all will have it in some degree. If there are one or two among the inmates who are not immune to scarlatina, then they will have that disease.

Every year there are added to the body politic in this city, as a natural increment, thousands of unimmune. They will all have to have these diseases sooner or later; rarely one escapes and passes through the expectancy of life without having one or all of the contagious diseases. Every year we have either an endemic or an epidemic of these ailments. After an epidemic, when the great majority of the susceptibles have had the disease, it dies out for a time, for want of fuel; but the human reservoirs are alive and carrying the virus until certain atmospheric conditions prevail, then the human "carriers" begin to scatter the contagium. The germs lie dormant in the human being for a season, and when the proper conditions prevail become active and then an epidemic.

Why Epidemics Cease

Let me quote from *The Health Bulletin* of January 25, 1913. "The epidemic of scarlet-fever occurred 1907. It was confined to the north and the west sides of the city; at least the situation on the south side did not develop anything like epidemic proportions. Practically speaking, a large crop of the susceptibles on the north and the west sides contracted the disease. Not nearly all of the susceptibles on the south side were exhausted; a large number were left untouched and therefore unimmuned. When spring set in the disease subsided." The Board of Health did not stamp it out, but spring, laughing, gentle spring, did.

"These holdover susceptibles and the steady increasing crop of the newborn susceptibles have caused more than the usual prevalence of scarlet-fever during the year following the last epidemic. At no time since 1907 has scarlet-fever reached the low mark of other past epidemic years." Why? Waiting for the newborn susceptibles to grow up and come in contact with some living human reservoir? The spark catches; the fever burns; the wind blows; an epidemic; then the old rounds.

Again from *The Bulletin*. "Today we have a tremendous crop of susceptibles, tomorrow we are going to have an epidemic of scarlet-fever [we have it], unless the public [and the public is an irresponsible entity and never can be relied upon] immediately awaken to the present threatening situation and unite with the Department of Health in efforts to suppress it." And by so doing have a large epidemic next year?

Again: "The spread of scarlet-fever can not be prevented by the health-authorities when the people and the doctors conceal cases or when the laws for the control of infection-bearers are disregarded." Now, who are the infection-bearers? The ones who

go in among the sick with the disease, then go out and mingle with the people? If so, then the doctors, inspectors, and nurses are the worst violators of the law.

The diseases, i. e., the contagia, are not carried in fomites; neither rubeola, variola, varicella, scarlatina, or any diseases of that nature. The human living reservoir is the carrier. Fomites will not carry the contagium of the diseases mentioned, any more than they would carry the virus of yellow-fever or of malarial fever. Many physicians believe it, but are afraid to act upon their own judgment.

The Human Resevoir

If you can destroy the human reservoirs, you may be able to control or restrain these diseases. Human reservoirs running around on two legs are attending our public and private schools every day and mingling with the susceptibles, and they vaccinate the unimmune just as surely as the mosquito does its innocent victims; only in a milder way.

From *The Bulletin:* "A scarlet-fever patient must be isolated for a period of five to eight weeks, depending on cessation of infecting discharge." That rule works a hardship upon all the family, as all are quarantined in the house or apartment, and it is the cause of more concealed cases than can be imagined. Hundreds of contagious diseases in this city are never reported. No physician is called in to see the cases. And why? Because the wage-earner, the bread-winner is quarantined, and no one left to supply the larder; and the city makes no provision to supply their wants and the necessities of life. That is worse than paganism. Bright, intelligent law-makers!

At least ninety-five *per centum* of these patients recover, and more than fifty *per centum* need no medical interference. The physicians in the labor-districts are afraid to report cases, because, if they do, that is the last call they will get from that family, or any family, in that neighborhood. When the cases are not reported, the men and women go about their daily labor, mingling among the throngs in the streets and in their places of business, and no one is injured.

By this procedure the fact is being established that a physician is not needed in seventy-five *per centum* of such cases.

If this quarantine rule is to be strictly enforced, how are the workers going to earn bread for their families and procure the necessities for the sick? Are all of the family to be housed up and not allowed to go out for fresh air, but rather must stay in the deoxidized atmosphere of the sick-room? God forbid! That treatment would be unjust, criminal. Why not isolate the sick one, if it can be done? And it can in the great majority of cases, and it is done in many of the cases. Then give the rest of the inmates their freedom!

If, by these few paragraphs, I have made the members of the profession think of the absurdity of our present beliefs in regard as to how contagious diseases are spread, I shall be well paid for my labor. When the vast majority of the profession and of the laymen come to see this thing as I do, then there will be much hope of keeping these diseases within bounds, and perhaps we shall be able to control them as already we have yellow-fever and malaria.

I believe we have a vaccine which will give immunity for a limited period to those who have been in contact with scarlatina and rubeola as well as an aborter to these diseases in the streptococcus and staphylococcus bacterins. Try it, and be convinced.

Having been in active practice for fifty years, I am no novice, nor do I take to new fads quickly. I investigate all things with an open mind, hold fast to that which is rational, and believe that "that which cometh out of the mouth this defileth man."

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[Doctor Stubbs has given our readers something very serious to think about, and he undoubtedly voices a growing opinion among sanitarians, more and more of whom are coming to look upon the *carrier* as the principal means of transmission for the contagious diseases. That this individual is the sole means of transmission, however, and that there is no danger in fomites, *we do not know*. In the present state of our knowledge quarantines seem to be a necessity and the health officer would be derelict in his duties who, *today*, would throw all our code of sanitary laws by the board. When we understand the matter better we shall, the writer feels sure, be able to blot out the epidemics of scarlet-fever, measles and diphtheria, without waiting for nature to exhaust all her available material—the nonimmunes. The future seems to us rich in promise, and we confidently look forward to the development of methods of prevention—perhaps allied to typhoid prophylactic vaccination—which will blot out these epidemics entirely. The scarlet-fever prophylactic bacterin is certainly promising well. —Ed.]

Emetine in Dysentery

By FREDERICK M. HARTSOCK, M. D., Galveston, Texas
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EDITORIAL NOTE.—While this paper has already appeared in "The Military Surgeon," Major Hartsock has very kindly given us permission to publish it in CLINICAL MEDICINE. *The topic is one in which many of us are much interested.*

CONSPICUOUS in medical annals of the 17th century was the introduction into Europe of two most valuable empirical remedies from South America: the cinchona bark and the ipecacuanha root.

It seems strange that these remedies should have sustained their reputation on purely empirical grounds over this period and their value and action be proven only in these late years on scientific grounds.

Ipecacuanha was early known to the Brazil Indians as an effective agent against dysentery, the roots being carefully gathered and preserved against this malady. The earliest reference to ipecac was made in an old treatise on Brazil by Pinchas, in 1625. It was introduced into Europe in 1672, and its value demonstrated by Helvetius, who is reputed to have secured a considerable sum by revealing the identity of the drug.

Ipecac was early used in India in the treatment of dysentery, but, strange to say, only in the past few years have practitioners elsewhere considered its value. In South America and the West Indies, it has been a household remedy for intestinal disorders attended by bloody stools, but in the standard works on treatment of fifteen years back bare mention is made of its utility in this regard.

As early as 1858 Docker employed it with great success at Mauritius in the treatment of dysentery.

Its usefulness gained impetus through the success obtained both in the British army in India and in the American army in the Philippines. A few years ago, various experiments were made to ascertain the antiparasitic properties residing in the drug; the most noteworthy of these being by Vedder, who found that one of the alkaloids, emetine, in high dilution had decided parasitotropic properties when brought in contact with cultural amebæ. He further demonstrated that emetine, and not cephaeline, was the active agent.

Following close on these experiments, Rogers demonstrated its practical use in amebiasis.

Emetine is an alkaloid of the cephaelis ipecacuanha, a plant grown principally in the Matto Grosse district of western Brazil. It is one of the three contained alkaloids, and it is best administered in the form of the hydrochloride. This one of its salts is the least toxic and least irritating, and is best suited for hypodermic use, because of its ready solubility.

The alkaloid was discovered by Pelletier in 1867, and forms an amorphous white powder, with a melting point of 60° C. It constitutes about 1.5 percent of the crude drug. As a base, it combines readily with the hydrochloric-acid radical, forming the most soluble of its salts, and one having a neutral reaction. The large drug houses are supplying it in ampules of 0.02 Gram (gr. 1-3), each suitable either for hypodermic or intravenous administration.

Emetine is a nauseant emetic and cardiac depressant; in large doses, it causes some renal irritation. Locally injected in the form of the basic alkaloid, it causes tenderness, which lasts for ten days or more; but, in the form of the hydrochloride, it is less irritating, though some patients feel the effects of a hypodermic injection for days.

The Action and Dosage of Emetine

Doses of 0.02 Gram of the salt daily have little general effect, or none, except therapeutically. Allen has given 0.24 Gram, without eliciting untoward results, except prolonged nausea.

Doctor Rogers recommends the hydrochloride of emetine, dissolved in 30 minims of water, in doses of 1-2 to 2-3 grain for adults, while 1-3 of a grain may be given to children of 8 years of age. He claims to have given as much as 1 grain to adults, two or three times a day, without observing depression or alarming symptoms; and 1-2 grain, subcutaneously, twice a day usually gives uniformly good results, never producing sickness and very rarely nausea. He further states:

"In connection with the absence of sickness after hypodermic injections of emetine salts, it is very important to note that the drug has extremely little depressing effect, so can be given in few doses in severe cases of dysentery, or even after copious hemor-

rhages from the bowels, without fear of addition to the shock; for I have never seen any bad effects following its use in such cases."

Emetine acts both centrally and locally. In large doses, there are observed two periods of gastric disturbance, one following the other at a 30-minute interval. The first owing to the absorption of the drug, the second, to its excretion by the stomach and intestines and subsequent reabsorption. This excretion by the intestinal mucosa explains its direct amebiotropic effect.

In a minor degree, emetine is a cholagog, although less so than the whole drug ipecac; it also is slightly laxative at first, but later has an astringent effect upon the intestinal mucosa. This latter fact explains its prompt symptomatic action in dysentery.

As to its action upon amebæ, *in vitro*, as already stated, high dilutions kill culture amebæ in a short time. It acts locally and through the blood.

"Emetine in 1 : 20,000, 1 : 100,000, and 1 : 200,000 dilutions killed the amebas, in one of the five series of experiments conducted by Wherry, after twenty-three and one-half hours' exposure, at 36° to 38° C. None of these dilutions was amebacidal in an hour. Wherry thinks it seems fair to presume that, when amebacidal action was manifested, the emetine acted on the trophozoits alone, and that failure to kill may be attributed to the presence of cysts. While emetine in 1 : 20,000 dilution was found to kill the symbiotic bacterium in forty-eight hours, it did not exert such an action in twenty-four hours in the amebæ-bacteria mixtures. Exposure to body temperature for twenty-four hours did not kill this saprophytic amebæ."

Baermann and Heinemann report:

"By subcutaneous and especially intravenous application of emetine, most of the amebæ contained in the intestinal wall and in the base of the ulcer were killed. For the destruction of the amebæ usually reappearing sporadically after 10 to 70 days, an intermittent treatment is necessary. Encysted amebæ are not directly killed by emetine. One or two intravenous or subcutaneous injections of 150 to 200 milligrams are employed, and, following this in the course of eight or ten days, in 2- or 3-day intervals, four or five subcutaneous injections of 100 to 200 milligrams."

Amebæ sometimes are found in the stools after the ulcers have healed, and in places isolated from the blood stream. In these cases, the alkaloid might be administered advantageously by the mouth. In a few cases, amebæ are emetine-fast.

Rogers, following the experiments by Vedder, found emetine hydrochloride, in dilutions of 1 : 10,000, to be destructive to amebæ in dysenteric stools, and in as high dilutions as 1 : 100,000 to render the cells inactive. He then employed the drug in acute amebic dysentery, in three cases, with marked success (June, 1912). Later (Aug. 12), he reported 12 cases healed, with 2 deaths. In October, same year, he paralleled the use of emetine with ipecac. Of 30 cases treated with ipecac, there were 13 cures and 11 deaths, in hospital. With emetine in 24 cases, there were only 2 deaths. The average amount of the drug used was 2 grains per case.

Rogers also found the drug to be effective in the presuppurative stage of amebic hepatitis, and to have a marked eliminative effect in actual abscess, used locally and hypodermically. As a local measure, 1 grain in solution is injected into the abscess cavity.

Baermann reported 22 cases, in which emetine was solely used, with 6 fatalities.

Lyons cites 6 cases, of which 5 recovered under emetine therapy. These cases were reported well after an average period of three months.

The remedy has been employed by U. S. Army surgeons—for example, Vedder, Whitemore, and myself—with marked results, as compared with the old treatment with ipecac.

My own experience with 3 cases was very satisfactory. The effect was prompt; but one case necessitated a repetition after a month. One case developed an amebic hepatitis, which promptly subsided.

There is no question but that this alkaloid has a marked effect, both experimentally and therapeutically, on amebæ, and a rapid reduction in the mortality for this malady is to be expected from its more extensive employment.

The question of relapse is one not definitely settled as yet, but further reports will clear this matter.

The treatment with emetine hydrochloride, then, may be summed up as follows:

1. Prompt administration of the drug before severe ulcerative changes have taken place.

2. Intravenous injections at the onset of the disease, followed by hypodermatic doses of 0.02 Gram daily.

3. Control of cases by microscopic examination.

Making Good in Medical Emergencies

By GEORGE H. CANDLER, M. D., Chicago, Illinois

EDITORIAL NOTE.—Our readers are showing much interest in these articles, which deal with problems that vitally concern every doctor—especially every young physician. Have you any suggestions to make, any questions to ask? You can help add to the interest of the series by your cooperation.

III. Asphyxia and Urgent Dyspnea

NATURALLY, death follows quickly the complete suspension of respiration. When the latter threatens, therefore, the physician has no time to lose but must think quickly and act promptly. Unfortunately, he often arrives on the scene too late, but since individuals supposed to be dead as a result of prolonged submersion in water or from inhaling poisonous gases have occasionally been resuscitated after hours of effort, it is essential that every known restorative measure be employed and persisted in until there is very definite evidence of their inutility.

Also, laborers working in trenches are sometimes buried by cave-ins; workers in elevators and mills have been smothered in bins of grain or flour; and firemen, well-cleaners, and workmen in factories and kilns, or those engaged in underground work, are not infrequently asphyxiated by breathing such poisonous gases as illuminating gas, wood-alcohol fumes, hydrogen, carbonic oxide, sulphureted hydrogen, chlorine, and the like. The water gas supplied as an illuminant in many cities is particularly deadly.

Classification of Causes of Asphyxia

Asphyxiation may be due to a variety of causes, among them: (1) to inspiration of gases, steam or chemical fumes; (2) to pressure upon the thorax or occlusion of the air passages from the outside, as in hanging, cave-ins of sand, grain, and the like; (3) to occlusion of the air passage in swallowing a foreign body, such as portions of food or false teeth; (4) to closure of the upper air passage by edematous effusions or hypertrophied tissue; for instance, edema glottidis, membranous croup, suppurative angina, and laryngeal growths. Aneurism of the transverse arch of the aorta and paralysis or spasm of the laryngeal muscles may cause profound dyspnea or even asphyxia. Young children or feeble-minded individuals may present urgent dyspnea as a result of swallowing boiling water from a kettle or faucet. Finally, asphyxiation may be due (5) to submersion in any fluid.

It is quite obvious that the first essential in meeting emergencies like these is to ascertain—and remove if possible—the cause of the asphyxia or dyspnea, and then take measures to insure the continued entrance of fresh air into the lungs. Occasionally the physician arrives before the individual has been removed from his dangerous position, and what he does during the next few minutes may mean life or death to the imperilled person. Here is a case in point.

A Thrilling Personal Experience

One day, some years ago, when I was walking through a street topping a sandy ridge in the Borough of the Bronx, in New York City, I observed a group of men standing beside a trench and gesticulating excitedly. Drawing nearer, I heard a rich Irish voice exhorting someone to "Roon like hell for a docthor, and get the pathrol wagin."

The voice emanated from a big son of Erin who (as is usual) was bossing a dozen "Eyetalian" excavators. About three minutes earlier one improperly shored side of the trench had caved in upon three unfortunate "dagoes," and they were buried entirely. Everybody was shouting, the Italians wept, waved their hands and called upon their patron saints, while the Irish boss, damning everyone—and the buried men in particular—in his excitement was tramping *down* the sand in the trench while trying to shovel all the dirt out at once.

I got the boss out, asked just where his men stood, and in a few seconds had one muscular young fellow digging and scooping downward toward the spot where we believed a man's head might be. Soon we uncovered a hat; ten seconds later the upper head and nose were in view; and in another second the mouth was bared. It was not a pretty face, for the pressure on the chest was terrific and he had been completely buried for four minutes at least.

As best I could, I cleansed the man's nares and mouth, and while the other men scooped the dirt rapidly away from his chest I shot a hurriedly prepared solution of strychnine and digitalin into the skin of the neck, and, the moment the man's arms were freed, elevated and depressed them as best I could while crouched on a board laid across the trench. Three minutes later the man was

extracted and I began artificial respiration. By the time he was conscious the patrol wagon arrived and hurried him off to the hospital.

Five minutes later the second man was uncovered, quite dead; the third victim was also beyond help.

The fact that the man I was able to save was known to have been standing erect as the cave-in occurred, and that his position was near the margin of the fallen earth did not seem to mean anything either to foremen or fellow excavators, whereas they should instantly have realized the possibility of baring his head quickly enough to save his life.

Experiences of this kind serve to teach the physician to do his own thinking, and to expect very little intelligent assistance from those immediately involved.

Important Facts to Be Kept in Mind

In a case of this kind, or where someone has been drawn from the water, it is usually not difficult to proceed effectively; but when one finds an asphyxiated individual surrounded by a number of excited, half-hysterical people, each with a different story of what happened—or did *not* happen—it is not always so easy to do exactly the right thing. In this place I shall not attempt to outline at length the treatment of apparent death from drowning. The Sylvester and other methods of procedure are described in every textbook, and in these days of "first aid" manuals and classes it is hardly likely that any practitioner is unfamiliar with the basal technic.

It may be well, however, to call attention to the fact that in most cases *four definite factors* must be borne in mind: (1) *The asphyxia*, due not alone to submersion, but also to blocking of the mouth, throat and bronchi with water or even mud; (2) *shock;* (3) *exhaustion* from struggling and fear (the latter may perhaps be excluded in some cases of attempted suicide); and (4) *exposure to cold*.

It is most important, therefore, to clear the air passages first of all, and then, by the usual rolling and positioning, to remove as much water as possible from the body and restore respiration. The moment breathing has been established, attend to the circulation. Earlier attempts in this direction may overtax an already dilated heart and prove fatal.

Administer strychnine and digitalin hypodermatically or, if these are not available, give 30 to 60 minims of whisky. Inhalations of ammonia, or even irritation of the nares with snuff or powdered tobacco, encourage efforts to breathe. The face and chest should be rubbed or slapped briskly and the limbs rubbed upwards.

The Importance of Heat

Heat is now the main thing; if possible, get the patient into hot blankets with hot water bags at his feet and along the spine. A few ounces of strong black coffee, given by the rectum, serve admirably as a restorative.

Many a life has been lost because the patient has been allowed to remain in his wet clothes in a cold wind during prolonged attempts at restoring respiration. It is quite true that breathing must be reestablished if the man is to live, but severe and prolonged chilling under such circumstances will not only tend to *prevent* respiration, but may cut short the process should it be restored. Therefore, while bending every effort to initiate breathing, strip off the saturated clothing, piece by piece, and get the body warm the best way you can, but as soon as possible.

Often a fire can be built and bricks heated therein, and clothing from bystanders can be commandeered and used to wrap both bricks and patient. However, do not let some excited person put an over-heated object directly against the skin. Severe burns have been inflicted in this way. The moment swallowing is possible give hot coffee and stimulants rather freely. Then get your patient to bed in a warm but well ventilated room, and let him sleep.

Since there is some danger of respiratory failure during the period of reaction, a watch should be maintained, and it is frequently desirable to apply a mustard leaf or other rubefacient both to chest and back.

The appearance of the apparently drowned person varies. Usually, however, the face is swollen and purple, the lips livid, the eyes suffused, and a frothy fluid oozes from the mouth and nostrils. The body is cold and usually the extremities are swollen.

Even when every sign discourages, efforts to restore life should be persisted in until pulse and respiration have been absent thirty minutes. Delay in starting artificial respiration costs many lives; failure to secure and maintain warmth many more; and lack of persistence, not a few. Do not permit anyone to hold up the body, head down, and caution assistants against too much energy. It is well to draw forward the tongue and keep it in that position with a rubber band or other contrivance, especially if the patient is placed on his back.

(*To be continued.*)

William Colby Cooper

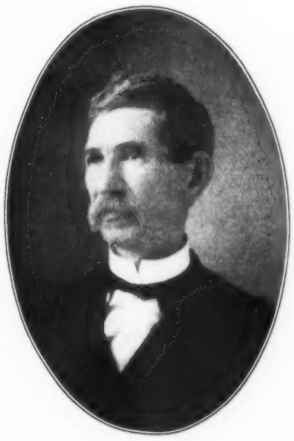
A Sketch of His Life and Work

By WALTER HURT, Chicago, Illinois

IN THE person of Dr. William Colby Cooper, of Cleves, Ohio, death has removed from the field of medicine one of its most remarkable figures.

Where he was born, and when, is of no consequence. Recounting formal facts of biography is but a literary habit. Readers do not really care for these things. Such data are for the stone-cutter and not for the scribe. What a man has *done* is more interesting; what he *was* is most important of all.

Doctor Cooper was picturesque always, in all things. Which is to say, he was original. Despising the copyist, in every walk of life he scorned to follow the beaten path of precedent.



Dr. William Colby Cooper

He was an originalist in medicine not less than in letters. To him, pathology was a philosophy as well as a science. Moreover, he was one of the far-visioned prophets of his profession, and it is probable many of his now heterodox therapeutical theories will be universally accepted after his name has faded into forgottenness.

By his friends, and especially since his death, Doctor Cooper frequently has been called great. Myself, I would not speak of him differently now than in life. Death changes nothing of man but his tissues. Greatness, while not precisely a relative term, is one susceptible of varied interpretations. This description should, therefore, be used advisedly. The contemporary eulogist, impelled by friendship, can afford, perhaps, to disregard fixed values and be inaccurately fulsome. It should be remembered, however, that the authentic biographer is also in a sense a historian. His personal estimates, in consequence, should be nicely exact. For sake of the perpetual verities it is well to be not more generous than just.

If to be great is to be conspicuous, then Doctor Cooper was not great. Fame, however, is not necessarily a correlative of greatness. Celebrity not always is the measure of merit. Reputation is largely a matter of repetition. Let it be said that any given man is great, and let it be said often enough and loud enough, and the world will come to believe it. We accept such apocryphal estimates as we accept the appraisals of the tax-assessor. Why not? When so few can perceive greatness inerrantly, there is an excellent utility in the vicarious verdict. Without talent for self-proclamation, Doctor Cooper lacked also a capable press-agent to conserve his rightful heritage of renown. His friends, however, can console themselves with the reflection that it is better to be an obscure genius than a national nonentity.

There is still another, and a truer, standard of measurement. The teacher is gauged, not by what he knows, but by what he is able to impart to others. Just so greatness consists, not of ability, but of accomplishment. And achievement is not what we acquire for ourselves, but what we bestow upon others. One is great according to what one gives to the world. Reserved ability does not enter into this reckoning. Potentially great, Doctor Cooper just missed actual greatness.

Cooper was one of those character-mysteries that baffle all attempts at analysis. Possessing, as has been pointed out, the potentialities of actual greatness (and this in varied avocations), his achievements in any direction were moderate, and even meager. His thought was fundamental, and to the discerning mind his versatile writings infallibly indicate that he might have been a great physician, a great teacher, a great litterateur. His performance, however, is in no manner commensurate with his capacity. It was not that he lacked an adequate appreciation of his own abilities; nor was he without proper ambition and aspirations. But he

was not endowed with that essential of success—the faculty for compelling recognition. And, so, his passage through life scarce made a ripple upon the waters of renown. His fatal failing perhaps was indirection. At any rate, his career is crowded with the pathos of unfulfilled promise, and his legacy is largely a record of "great things left undone."

In view of the immense possibilities, the pity of this is infinite. It seems not too much to say that, with proper application and direction, Cooper might have revolutionized in many respects the theory and practice of medicine. In the realm of unspecialized thought, he might have established new systems of philosophy. In *belles-lettres*, he could have produced imperishable classics. Some of his verse is of a very high order, and a few of his poems are metrical masterpieces. It was as a thinker, however, that he excelled. His philosophic writings alone should redeem his life from any reproach of insufficient results. In my opinion, his "Mind and Matter" matches the metaphysics of Kant; his "Immortality" equals the great effort of John Fiske; while his "Primitive Fundamental" and "Gospel of Philosophy" are not surpassed even by the mighty Haeckel. And in literary elegance they excel each of those masters. It is not short of tragical that these tremendous works are nearly unknown!

Cooper's book "Preventive Medicine" is widely and profitably read by the profession. A few of his miscellaneous writings have been collected in an indifferently edited volume entitled "Tethered Truants," but the greater part of them are interred in periodical files throughout the country and beyond hope of resurrection to enrich permanently our literature. Also, he has left an unpublished novel and various manuscripts of considerable value.

Doctor Cooper can best be described as "different." He seemed not to possess any imitative powers. He was incapable of conventionality and did not know how to be commonplace. Invariably his veriest trivialities of action or speech were triumphs of originality. His every output was a creation.

Everything he did was distinctive. In nothing was this quality more evident than in his literary product. Many medical magazines the sparkling flow of his pen has redeemed from intellectual drouth, and therein were thousands of his professional brethren delighted with his delicious whimsicalities. He had the most extensive vocabulary I ever have encountered; yet, he never used an obsolete word, nor did he ever use a legitimate word except with absolute accuracy. In this connection, I feel that I can not do better than to quote from an extended estimate which I wrote many years ago:

"If the word 'unique' is not, by reason of being overworked, ready for the linguistic undertaker, it can appropriately be applied to the literary output of William Colby Cooper. He is *sui generis* in the realm of letters. His thought tinctures with originality everything it touches. He says even the commonest things in the most uncommon way. He juggles language with amazing dexterity, but always consistently with the soundest sense. He is an intellectual acrobat and a verbal gymnast, who charms his audience with his agile art. He can better turn unusual words into striking phrases, and twist these into more varied shapes, than any writer of whom I have knowledge.

"A tendency toward altisonance characterizes, but scarcely mars, Doctor Cooper's style. His ideas pass across the printed page in polysyllabic procession.. This inclination is inherent, therefore he makes discreet and discriminative use of a vocabulary that is coextensive with the lexicon. Words are the disciplined servants of his thought.

"Doctor Cooper is vastly versatile, his work ranging widely from the farthest flights of fancy to philosophy's profoundest depths. Tender verse or sparkling epigram or thoughtful essay or lively story he turns off with equal ease. He is a paragrapher *par excellence*. He is both a humorist and a wit. The quaint quality of his humor has won for him the sobriquet of the "Mark Twain of Medicine." His wit is keen and glittering like sunlight on a blade of steel.

"When it is known that Doctor Cooper is self-educated, the extent of his erudition is cause for surprise. He has delved deep into the mines of classic lore, is familiar with the ancient and modern philosophies, and has studied to purpose the literature of every land.

"Doctor Cooper has had an extended editorial experience. Besides being engaged in newspaper work, in Indianapolis he conducted *The Medical Review*. For fifteen years he directed the editorial destinies of *The Medical Gleaner* of Cincinnati, placing upon it the impress of his individuality and making it distinctive in medical journalism."

Not the least important part of Cooper was his personal philosophy, and not the least remarkable fact is that he practiced it. He lived his religion. His ethics were expressed in his daily acts. He preached the

gospel of gentleness, and kindness was his only creed.

In a letter received from his widow occurs this statement: "He was not afraid of death."

Of course. There is something unspeakably incongruous in the idea of this gentle spirit faring forth into the Vague Valley with any feeling of fear. Moreover, he was a philosopher, and the philosopher can know no fear. Epictetus never voiced a greater verity than when he said, "No harm can befall a good man, whether he be alive or dead."

Out upon the old barbaric belief that there is anything repellant in death—that it is a thing of fearsome aspect or cruel consequences! The process of physical dissolution is as beneficent as any other normal phenomenon of nature. Personifying, we may say that Death is our dear mother who at the end of the journey takes her tired children into her comforting arms.

The widow's letter contains another significant sentence:

"He died in the religion by which he had lived—the Golden Rule."

Than this no nobler epitaph could be carved to the memory of any mortal. Let it stand forever in the minds of men while the most steadfast monument of graven stone crumbles to dust that is scattered by the winds of oblivion.

Farewell to our friend. Blessings blossomed where he passed, and he reposes today beneath the plenitude of roses which he planted for others along life's lane. He has dropped to rest at the end of the road—may his sleep be sweet and enduring.

Chicago, Ill.

A Farewell to Dr. William Colby Cooper

By Walter Hurt.

(Written in 1895, on the occasion of a parting which at the time promised to be permanent.)

'Tis a random rhyme I send
To you, Cooper, my old friend,
For the sake of elder days,
When you listened to the lays
Springing from a harp o'erstrung
With the yearning of the young
And half-breaking heart of mine—
For the sake of "auld lang syne."

Though a ragged rhyme, old friend,
Keep it kindly to the end.
'Twill, perchance, recall at times
Fairer thoughts and rarer rhymes—
Days our eyes exchanged, old friend,
Fancies each could comprehend—
Though no more I clasp your hand
With the touch you understand.

Take this tribute I extend—
I have known you well, old friend:
Heart of hope and tongue of truth,
Soul as sweet as sinless youth,
Thoughts of gold and jeweled words,
Songs free as unfettered birds—
These, and more, old friend, are thine—
And a tear for "auld lang syne."

Making Good in Surgery

Suggestions for the Surgical Treatment of Chronic Conditions

By RALPH ST. J. PERRY, Farmington, Minnesota

EDITORIAL NOTE.—The kind of surgery discussed in this article is that which any good physician should know how to do himself. Doctor Perry is not planning to make surgical "specialists" out of the readers of this journal; but he is anxious to help them to increase the scope of their work—and their incomes.

WHILE many of our rural inhabitants seem obsessed by the idea that good surgery flourishes only in the larger cities, the surgical fraternity is rapidly reaching the conclusion that the best conditions for surgical success are to be found in the country. Some time ago, after having spent several years in city practice, nine-tenths surgical, an extraprofessional business emergency caused me to change my base of operations to a small western town, and ere six months had passed I had become so enamoured of the simple country life that I refused to return to the burg of teeming thousands. After a quarter of a century as a "country doctor" I am still on the job.

Soon after my rural debut there arose the necessity of sending two patients to the nearby big city for operative treatment. Both came home in pine- and rosewood; both operations had been successful, newspaperly, and neither death-certificate made mention of any operation having been performed. A little quiet investigation developed that, of some twenty patients who had gone from that territory to the cities for operations during the previous two years, only two had returned to tell the tale—*a mortality rate of ninety percent!*

Many of these deaths were due to procrastination on the part of patients, relatives, and others involved, while some were owing to the excitement and exhaustion of the journey to the city. I made up my mind that I could produce at home as good results as did the surgeons in the city, certainly no worse, and very probably much better, as I would get hold of the patient sooner. A trip to one of the "surgical centers" showed one real hospital and two reformed residences. Many of the operators had had less surgical experience and poorer training than I myself and depended upon "nerve" and the prestige of the city to bring them business.

The Country the Best Place for Surgical Institutions

In the twinkling of an eye a plan was formed, and my home in the village was transformed into a private hospital and Dr. Perry's Sanitarium came into being. Twenty-five years ago the specialties were not so numerous nor so highly developed as today, and my work was announced as surgery, diseases of women, and chronic diseases, a trinity which is generously comprehensive and permits the treatment of almost anything, from alopecia to ingrown toe nails. Arrangements were made with a "practical" nurse to look after patients under my personal supervision. The schedule of fees was the same as that in the cities.

At first things came slowly; but as it became known that we furnished A No. 1 accommodations, with good "home-cooked" food, and that the results of our treatments were good business began to come our way. In two years we were getting patients *from* the nearby cities, and during the last year we had patients from New England and New Mexico, from British Columbia and the West Indies. What we have done any other person of reasonable skill and persistency can do.

The proper treatment of chronic conditions demands a quiet, restful place, removed from home and business cares and irritations, a cheerful place where the gloom-bugs are told to get hence, and where there is an abundance of good, fresh food, pure air, pure water, and soothing silence—a health-making, strength-building combination to be found only in the country. And while taking every advantage of nature's adjuvants, do not overlook the necessity of constant study and observation, of postgraduate work and of rubbing against your fellows at society meetings. Don't get into a rut—the chief difference between a rut and a grave is one of dimensions, and not of contents.

The citizen of the country as a rule is a good business proposition; he has stability of habits, of income and residence, and usually is able to pay a fair fee for services rendered. Furthermore, the patient who comes to consult you in your village office usually has his or her mind made up to take treatment of you, if given any encouragement, and does not go "shopping" among a dozen or more competitors. Being a "farmer" yourself, you can

talk farm-talk to him intelligently, can sympathize with his troubles and share in his joys; all of which line of conversation tends to get business and helps to while away the tedium of a patient's convalescence.

Just a word about encouragement. Do not promise too much and do not guarantee cures. It never pays to give rise to false hopes, for the victim of your deception never forgets it, though the benefit done will readily fade from the memory. There are too many elements and factors involved in convalescence that are beyond your control, or any human control, for you to undertake to guarantee the results of their combined action.

How to Overcome Obstacles

In many villages, your work will be handicapped by the lack of modern facilities, such as electric lights, water-works, sewers, and so on; but these can be overcome. Incandescent mantles furnish light and batteries will furnish electricity till the time when you can get capital ahead to install a private electric plant; the air-pressure water-system, with a septic-tank attachment, will make you independent of other plants. Your local, farmers, and long-distance telephone lines put you in touch with your tributary territory, and you are as well fixed as your city competitor, and at less expense.

Your office should either be on the ground floor or affiliated with a passenger-elevator, for patients suffering from chronic diseases, especially women and the aged, find it difficult and frequently impossible to climb stairs. Also, the office should be near a hotel, the depot and the public hitching-place. Farmer-folk will invariably drive past your office, hitch up on the public square, and then growl at having to walk back to your office. As to the plan and equipment of your office, I shall defer remarks to later articles. (Don't let your subscription expire!)

The greatest obstacle to success in the treatment of chronic conditions is that malignant verb "I can't"—an expression which may be the audible stigma of either jelly-spine or psychic inertia. The next time you see Miss Chicago just reach out and toy with her bosom long enough to become infected with her motto, "I WILL!"—and then "hop to it." The necessities of local conditions will make you an omnivorous specialist, and if you are any kind of a good workman you will soon find the hopping good. As you progress in your work, you will discover some one line in which your talent seems to lie, in which you get better results than ordinary, and *that* is the specialty for you to cultivate and to feature, although not relegating the other work to the discard.

I have no sympathy with the doctrine promulgated by some, that it is impossible for a man to be a general surgeon, capable of performing any operation required of him. The fundamental principles of surgery are the same in all specialties, and any person possessed of the necessary anatomical knowledge, correct technic, manual dexterity, and a knowledge of the details of an operation should be able to perform that operation, regardless of the regional or functional limitations of the organs or tissues involved.

Undoubtedly there are operative procedures of an exceedingly delicate nature that demand highly specialized skill, but these seldom come in the general course of one's business. When such cases are encountered, however, it is always best to call in as consultant some other surgeon who has acquired the desired expertness and have him examine and operate in consultation with you. Don't turn the patient over to him, though, but have it understood that he is operating under your directions, upon *your* patient.

Chronic Diseases—Beware the Knife

In handling chronic conditions, you will early learn that many of your patients have also been the patients of others, and it behooves you to be informed regarding the methods of treatment followed by your competitors, that you may have some idea of what treatments have been previously tried out and failed—for, had they not failed, the patient would not have come to you. Study, investigate, and use every method calculated to restore rundown vitality, to arouse dormant organs into function and to revive normal cell activity.

Do not be ashamed to use old-fashioned remedies or methods, for many chronic cases were cured before serums were dreamed of or phototherapy was perfected. A good book to study is Hahnemann's "Chronic Diseases," a work a century old; you may not believe in his therapeutics, but his adjuvant methods are worth studying. And, even though it be treason plus *lèse majesté*, I frankly assert that thousands of "old chronics" have been cured by the treatments therein detailed.

Do not overlook those methods of treatment which discard the knife, for some people have wearied of being trimmed and pared and sliced and excised. The present-day exuberance of the fakes shows the mental trend of the laity. Nearly every fake has a germ

of truth in it; it may be an old idea worked over or a neglected method rejuvenated and renamed, but, whatever it is, it proves the contention of the fakers that a part of the public thinks it has had too much surgery.

Too often the success of the illiterate "irregulars" is built upon opportunities neglected and ignored by the educated M. D.'s. Let me suggest that you do not overlook or neglect electricity, massage, water, gymnastics, heat, light, suggestion, the U. S. P. and N. F., nor the active principles, while surging among the chronic conditions. More of detail in my next.

Refraction for the General Practitioner

By THOMAS G. ATKINSON, M. D., L. R. C. P. (London), Chicago, Illinois

Clinical Professor of Pediatrics, Chicago College of Medicine and Surgery; Author of "Essentials of Refraction."

EDITORIAL NOTE.—Why not attend to the refractive troubles of the people of your community? You can do so, and add largely to your income. The expense for equipment is small, and it is not difficult to learn to take care of ninety percent of the troubles. Read what Doctor Atkinson has to say on the subject.

Equipment

THE necessary equipment for refraction-work is very simple. It consists of a trial-case, retinoscope, and ophthalmoscope, to which must be added a distance test-chart and a retinoscopy-lamp. Trial-cases vary in size, contents, and price. A small case may be obtained for $25 or $30, but it really is not enough for effective and satisfactory work. A $50 case is better, and a $75 one still better.

The case last named is sufficient for all the needs of the ordinary refractionist. It contains convex and concave lenses, bound in metal (convexes are always bound with white and concaves with gilt metal), from 0.25 up to about 20 diopters, running in gradations of 0.125 in the lower dioptrisms and of 1 D. (diopter) in the higher; convex and concave cylindrical lenses (similarly bound) running up to 12 or 15 D. in convenient gradations; prisms up to 30 and 40 degrees; blanks, pinholes, Maddox rods, stenopaic slits, colored glasses, chromatic lenses, trial-frames, etc. A distance type chart is always given with the trial-case upon request.

A good retinoscope can be had for about $1. There are two kinds of retinoscope, the plane and the concave. As between these two, the practitioner must choose for himself, after learning the method of usage in both instances. Most operators prefer the concave. The writer, on the other hand, prefers to work with the plane one. A detailed description of the instrument and its uses will be given in the course of instruction on retinoscopy.

An ophthalmoscope is somewhat more expensive than a retinoscope, being a more complex instrument. There are two makes of ophthalmoscope in general use, the May and the Loring. Choice between them is a purely personal matter. The May is a little the more expensive, costing $12, while the Loring can be had for $8.

There is still another one, known as as the Zeng ophthalmoscope, which carries its own source of illumination in the shape of an electric bulb, furnished with power from a small battery to be carried in the pocket. This latter instrument is exceedingly convenient for physicians' use in places where proper illumination is hard to get (as when the patient is lying in bed or lives out of the reach of electric or gas light), but has no advantage over the other kinds for office work, while being considerably more expensive.

The best possible light for use with the retinoscope and ophthalmoscope is an electric bulb of at least 32 C. P. and cylindrical chimney; but a gas or even an oil flame will do very well. Whatever light is used, however, it should have a cylindrical opaque cover, with a circular bullseye aperture, and over this aperture a diaphragm with a circular hole 10 mm. in diameter for the light to emerge. The light should be on a bracket which permits of its being placed at any height and in any lateral position that may be desired, within the ordinary limits of such head work. The doctor who is doing his own nose and throat work already has an arrangement of this kind.

Examinations of the eye with these instruments should be made in a dark-room, so that the illumination of the patient's pupil may stand out in contrast from the surrounding darkness, and the observation be thus rendered easier and more accurate.

General Principles

The undulatory, lateral waves constituting light are not regarded in optics, but rather the straight lines in which these waves travel are taken as units; and these constitute rays.

Rays of light, upon leaving an object, diverge in all directions, and within a certain distance they strike an observing eye in a divergent fashion. This distance is roughly calculated at 6 meters; hence, rays which come from an object less than 6 meters away from the eye are called divergent or finite rays.

At six meters from their origin the divergence of the rays entering the eye is so slight that to all intents and purposes they may be regarded as parallel. Hence, rays coming from a point 6 meters or more from the eye are called parallel or infinite rays.

Refraction is the deviation, or bending, from its course which a ray of light undergoes when it passes from one medium into another of different density, and the surface of which is not at right angles to the entering ray.

When a ray of light passes from one medium into another of different density, if the surface of the receiving medium be perpendicular to the entering ray, it continues to travel in the same straight line as before; but, if the surface be not perpendicular to the ray, then the ray, upon entering it, is bent from its course.

In passing from a rarer to a denser medium, the ray is bent toward the perpendicular of the refracting surface; in passing from a denser to a rarer medium, the bending is away from the perpendicular.

The greater the discrepancy of density between the two media, the greater the degree of deviation, or, in other words, the larger the index of refraction.

When the surface of a refracting medium is spherical, only one of any group of rays which enter it will be perpendicular to the surface and will pass through unchanged; the others are bent, or refracted.

But, since the curvature of the surface bears a uniform relativity to the radius of the sphere, these rays will be bent with a similarly uniform relativity, and will, therefore, all be brought to a point on the radius, or axis, of the sphere.

The path taken by the unchanged ray, entering at right angles to the surface, is called the principal axis; the ray itself is called the principal ray, or ray of direction.

The point on the axis where parallel, or infinite, rays refracted by a spherical surface are brought to a point is called the principal focal point.

The distance of this point from the refracting surface is called the principal focal distance.

There is a certain point of nearness to the refracting surface from which rays, emerging, are so divergent that the refracting medium can no longer render them convergent, but only parallel. This point is called the principal anterior focus.

The eye is a spherical refracting organ, of such a curvature in relation to its length that, when the eye is at rest (i. e., when no accommodation is in force), parallel, or infinite, rays are exactly focused upon the retina.

Lenses

There are two kinds of lens, as to curvature—convex and concave; and two as to form—spherical and cylindrical.

Convex lenses often are called plus lenses, because they add to the refracting power of the eye; and concave lenses, minus, because they subtract from it.

Inasmuch as rays of light, upon entering a denser medium, are bent toward the perpendicular of the refracting surface, it is clear that rays of light which enter a convex lens (other than the principal ray) are bent toward each other, so as to converge at a point; while those which enter a concave lens are bent away from each other, so as to diverge from an imaginary point.

The focal point of a convex lens, therefore, is the point at which the refracted rays actually come to a focus, and is a positive point. The focal point of a concave lens is the imaginary point at which the refracted rays would meet if projected backward on the concave side of the lens, and from which, of course, they appear to diverge, and is a negative point.

The focal length of a lens is the distance between the refracting surface and the focal point. Since the refracting power of the lens is in direct proportion to its curvature, it is plain that focal length is less as the curvature is greater. Mathematically this is expressed in the formula that curvature is equal to 1 divided by radius; or, transposing the formula, radius is equal to 1 divided by curvature. Now, as focal length is always half the radius, focal length is equal to 1 divided by twice the curvature. Hence, the larger the quantity represented by curvature, the less the quotient of its division into 1, which represents the focal length.

The refracting power of a lens is made up of the curvature of its surface and the density of its material, and is called its dioptrism. Since, however, all lenses are made of uniformly dense material, their relative dioptrism is in fact dependent upon their different curvatures.

The dioptrism of a lens is measured by the distance in which it is able to bring parallel rays to a focus; the shorter this distance, the greater the dioptrism of the lens. That is to say, dioptrism varies inversely as the focal length. As stated, both these functions depend upon the degree of curvature; therefore, the greater the convexity or the concavity of the lens, the greater its dioptrism and the less its focal length.

The standard of dioptric measurement is a lens the curvature of which enables it to bring parallel rays to a focus in exactly 1 meter. This lens is said to have a strength of 1 diopter (or 1 D.). Lenses of greater curvature express their dioptrism in multiples of 1, and those of less curvature in divisors of 1. Thus, a lens which is able to focus parallel rays in 1-2 meter is said to have a dioptrism of 2 D., while one which brings them to a focus in 2 meters is designated as 0.50 D.

Spherical lenses, as we have seen, are segments of a sphere and refract all the rays, except the principal ray, toward or away from a point, the resulting path of the rays being cone-shaped.

Cylindrical lenses, which are segments of a cylinder, refract only the rays that strike them at right angles to their axes; those which strike them in the same line as their axes are perpendicular to their surface, and therefore are not bent at all. Cylindrical lenses, therefore, refract rays in a straight line toward or away from a point, the resulting path of the rays being fan- or wedge-shaped.

Lenses are, nowadays, made of good crown-glass. They are ground in three different forms: (1) One side plane and the other side either convex or concave, known as plano-convex or plano-concave. (2) Both sides are either convex or concave, and are known as bi-convex or bi-concave. (3) One side convex and the other side concave, but with the net refracting effect either convex or concave, as the case may be, known as convex or concave meniscus lenses, according to which curvature predominates.

The latter form of lens (meniscus) is the one almost universally used in the case of spherical glasses and forms the basis of what is known as the periscopic or toric lens, of which more will be said later. Cylindrical lenses, however, are usually ground with one side plane, except when they are combined with spherical lenses, in which case the spherical curvature is ground on one side and the cylindrical on the other. In large periscopic, or toric, lenses the menicus principle is carried out.

(*To be continued.*)

Bryonin, and the Treatment of Chronic Rheumatism

By JOHN M. SHALLER, M. D., Cincinnati, Ohio

WE ARE informed in current medical literature that bryonin is useful in the treatment of chronic rheumatism; that is, supposedly in any case, no matter what the dominant symptoms may call for.

According to Gould, rheumatism is a constitutional disease characterized by pain in the joints and muscles, tending to recur, and associated with exposure to cold and wet. The generally accepted idea of "rheumatism" is similar to this; namely, that it is a condition characterized by pain in the joints and muscles and not directly and positively attributable to definitely known causes. However, Gould's definition does not apply to gonorrheal rheumatism, so called. While it is a constitutional disease, with pain in one or more joints, it does not depend in any way upon exposure to wet or cold.

As a matter of fact, the ingestion of an excessive quantity of meat may produce as severe pain in various muscles as exposure to wet and cold. Rheumatism will eventually be classified as a disease resulting from the absorption of the toxins of faulty metabolism, which, not being rapidly eliminated, are stored in muscles and other structures where they produce pain because they are irritants.

When pain and stiffness in various muscle groups repeatedly appear a few hours after eating meat or other equally indigestible food, cause and effect are very closely associated for that particular individual. I know a man who invariably has severe pain and stiffness in the muscles of his neck with headache, loss of memory, and insomnia a few hours after eating heartily of beefsteak. It is simply ptomain poisoning, and, yet he was invariably treated, though unsuccessfully, for "rheumatism."

Not every sore muscle and tender joint is "rheumatism" or due to excess of "uric acid."

The "uric-acid retention" business has been overdone.

It is amusing to meet people who, in the course of general conversation, gleefully remark that Dr. So-and-So told them that they had "uric acid." Then straightway those who are not so fortunate will seek this doctor, and they, too, will have "uric acid." Society simply *must* have it, and, of course, doctors (who must always be accommodating) comply with the requirements and everybody is happy —except perhaps those who really *are* lithemic.

When to Prescribe Bryonin

Thus, gradually I come to the real subject-matter of this paper. Discriminate. Look for specific indications. Prescribe definitely. Never give medicines that are recommended in a general way for the treatment of a "named disease."

Digitalis, veratrum, aconite, and bryonin are all stated to be "good for pneumonia." In fact, they are highly recommended; but each drug has its specific indications and cannot be given indiscriminately to any or to all patients simply because pneumonia is present. This kind of hit-or-miss practice is responsible for the very rapid growth of the no-drug methods.

Bryonin has specific indications in the treatment of socalled rheumatism. It is *not* good for all chronic patients, any more than aconite is good for all cases of acute pneumonia.

Bryonin relieves pains made worse by movement and accompanied by dryness of the mucous membranes of the mouth and nose. All "rheumatic pains" are not made worse by movement. On the contrary, some forms are made better thereby and will entirely disappear after moving about for a while. This applies both to muscle and joint pains. The best remedy for these latter pains is rhus toxicodendron.

Chronic rheumatism is not, by any means, the only disease, or perhaps symptom, for which bryonin is used. Rheumatism is really a symptom, i. e., pain in a muscle or joint that is not conspicuously associated with some obvious basal pathological condition. However, relieve a symptom, prevent its return, and the patient is cured.

Special Indications for Bryonin

Bryonin, then, is usually beneficial in those diseases (or even unclassified symptoms) in which pain on motion is marked and the mucous membranes of the mouth and nose are dry. The following list shows that bryonin may be used in many apparently varied ailments, but, it will be seen that in each instance there is either pain on motion or dryness of the secretions or both of these symptoms.

Bryonin may be successfully used in acute pneumonia with involvement of the pleura. The indications are pain on breathing and coughing, especially when the cough is hard, dry, and hacking.

In chronic nasal catarrh, with dryness of the mucous membrane, and when dry, hard crusts form in the nose.

In headache, occipital or frontal, provided the pain is made worse on motion, that is, by moving the body, the head or even the eyes.

Pain of a sharp character in the hepatic region worse upon inspiration, walking or any movement; tongue dry and heavily coated.

Muscular soreness and stiffness resulting from excessive use of the muscles.

In constipation with dry, hard stools bryonin is useful. There is not only dryness of or scanty secretion in the bowels, but also of the tongue, which is often covered with a thick, yellow coat. The feces are difficult to expel, on account of their dryness. There is no better combination for sufferers of chronic constipation than Waugh's anticonstipation granule; but, excellent as this remedy is, there may come a time when the patient becomes tolerant and it fails to produce results. Two granules of bryonin, 1-64 grain each, added to the usual dose of anticonstipation pills, will then often produce splendid effects.

As bryonin is indicated when there is dryness of the mucous membranes of the mouth, the inference is that there is also dryness or lack of secretion in other parts of the body. In chronic rheumatism, there is usually constipation as well as scanty urine. The skin may also be dry.

In edema and dropsical effusion, there is scanty secretion of urine and constipation, not so much because the secretions of themselves are at fault, but through the lack of blood pressure. Digitalis will often remove the dropsical conditions, while bryonin will increase the secretions in general, especially those of the liver and gastrointestinal canal.

Not a Remedy for All "Rheumatisms"

The idea is, not to give bryonin in a routine way in all cases of chronic rheumatism but where it is indicated and called for. There may be pains in joints and muscles and elsewhere that are not rheumatic, so called. Different causes produce symptoms similar to

those for which bryonin is usually given, but which require other medication. As has been before mentioned, bryonin has specific indications, and when pain is made worse by motion and there is dryness of the mouth, bryonin is indicated and will usually give good results, no matter what the original disease is. This applies to pains in the joints, muscles, tendons, nerves, and serous membranes. The secretions are scanty. There is an accumulation of some poisonous product of faulty digestion, which is an irritant poison, and there is then a swollen, tender, and contracted muscle with all evidences of inflammation. Elimination is needed very badly, to purge, as it were, these infiltrated muscles of their poisonous contents.

Bryonin, however, is not recommended as an active, quickly efficient cathartic. It is likely to prove painful, but it may prove helpful or synergistic in combination with other evacuants.

Calomel, podophyllin, and bilein in combination will certainly stimulate the liver and produce copious secretion both from liver and bowels. It should always be followed by a saline laxative.

It is better to prevent active catharsis, except in dropsical effusion, by means of bryonin, and use it in such doses as will gently increase the secretions of the liver, intestines and kidneys. In severe headaches that are made worse on motion of any kind a cure is often quickly produced by taking one granule of bryonin every fifteen minutes for five or six times. Relief is obtained by stimulating suppressed secretions, which drains from the involved tissues the irritating poison that has been deposited there.

Relief of "Pain in the Back"

A condition that is very annoying in both sexes consists of pain across the back of the pelvis and lower lumbar region not infrequently extending down the thighs. The muscles mostly affected are the gluteal, erector spinæ, and latissimus dorsi. The back aches and feels stiff and sore, the pain is constant and made worse on movement. Two granules each of bryonin and rhus tox., taken every two hours, will generally give relief.

Better than the above, however, is that excellent combination granule of Taylor's containing macrotin, bryonin, colchicine, rhus tox., and strychnine arsenate.

It is sometimes difficult to give a single medicine, or to place confidence in such, especially after using for years combinations of many remedies. One is likely to feel that he is not doing his patient justice when prescribing but one medicine. A combination seems better. The patient may have more chances of getting better or of getting worse. In many combinations, all of the contained drugs are not indicated, in fact, some of them may be contraindicated. The rule should be, never to give a drug unless there is a positive indication for it.

Study the most prominent symptoms, and find the medicine that is definitely indicated. This will in time make the practice of medicine much more exact, and will restore the confidence of the general public, which without doubt has been greatly shaken, as is evidenced by the large class of people who now demand no-drug methods.

Believe in the power of medicines to cure. Be positive about this. Remember, however, that cure depends upon the proper selection of medicines that are indicated, and which are adapted to the particular condition and to the special peculiarity of the patient as well as that of the disease. The conditions, not the disease as a whole, need specia[1] attention. It will be learned that many of those stubborn and apparently hopeless cases can be alleviated and cured that would otherwise show no improvement.

Ofttimes there is only one symptom that is objectively manifested. Because it is single, it cannot be raised to the dignity of being classified as a disease. It may be intense pain varying in character, it may be vomiting, diarrhea, vertigo or just that tired feeling. No amount of skill, with even the most careful examination, can add one subjective symptom or reveal the cause, and, yet, there is a cause; there must be.

There is just the one symptom to treat, and generally there is one remedy definitely and specifically to meet it. It is not always necessary positively to diagnose the disease. If it should appear necessary, it is not always possible, and there is nothing to do but to treat the one symptom or the condition that is present, and to treat it as definitely as possible.

As to the Dosage

Two granules of bryonin, 1-64 grain each, given every two or three hours, is the usual dose, whether free bowel action has been produced or not. This should be continued until relief is obtained, or until the bowels are thoroughly moved or griping in the stomach or bowels is produced. The dose should then be reduced to one granule every two or three hours; just enough to keep up gentle stimulation, and not any prominent physiological

effects that border on the poisonous. In chronic cases, this treatment should be kept up for several weeks.

Other indicated medicines may also be given; bad habits should be corrected, strong suggestions should be made in regard to all the effects expected from the drug, as well as to the cure. Always be positive in regard to the results to be expected. Let patients anticipate them. If the physician cannot do this in regard to any one medicine, he should select some other remedy concerning the effects of which he feels certain enough to tell his patients what to expect.

Bronchial Asthma

A Study of its Pathogenesis and Therapy

By JOSEPH JOHNS, M. D., Ionia, Michigan

IN HIS writings, Samuel West has said: "Asthma must be regarded as a reflex neurosis, the symptoms of which are spasm of the bronchial muscles, of the diaphragm, and of the other inspiratory muscles, associated with more or less vasomotor disturbance in the bronchi."

This brief statement undoubtedly sums up the conditions present in this disorder, as it is now generally accepted by the majority of medical authorities; and when one stops to consider the anatomical and physiological relations of the structures involved in an asthmatic attack, together with the temperament of the patient and the stimuli necessary to produce an attack, it is readily seen how practical this theory is.

First let us consider the distribution and connections of the nerves supplying the respiratory mechanism. Branches from the sphenopalatine ganglion of the sympathetic system supply the lining membrane of the nose, pharynx, and eustachian tubes. This ganglion has motor, sensory, and sympathetic roots, and communicates with the facial and pneumogastric nerves. Secondly, the schneiderian membrane is continuous with the lining membrane of the nasal ducts and eyelids; the pharynx, eustachian tubes, and the tympanic cavity; the larynx, trachea, and bronchi. Thus, we find united in closest connection all these structures; and we may state as an axiom that "any inflammatory process in one part of the upper respiratory tract tends to extend to the contiguous parts."

The physiology of respiration is recognized as an involuntary reflex, and each respiratory act necessitates a finely coordinated adjustment of the contraction of a number of muscles, which adjustment is dependent upon a controlling nerve-center located in the medulla oblongata and known as the respiratory center. Connected with this center, are the afferent and efferent respiratory nerves. The afferent, or sensory, nerves are the pneumogastric, glossopharyngeal, trigeminal, and the cutaneous nerves. These nerves conduct stimuli to the respiratory center from within the air-passages, from more remote parts of the body, and from the skin. The efferent, or motor, nerves are the phrenics, some of the spinal nerves, and the motor branches of the vagi. These control the action of the diaphragm, and of the bronchial and other respiratory muscles. All these structures are also connected with the sympathetic system, which controls the vasomotor muscles. The pneumogastric nerves possess both bronchodilator and bronchoconstrictor fibers, general sensory and trophic fibers, and secretory fibers to the mucous glands. Thus, we see that these nerves are the principal ones in the controlling of the respiratory mechanism.

The condition necessary for the generation of a nerve impulse is an external stimulus acting upon an irritable neuron. While life exists, stimulation of varying intensity is always going on, and there is no moment at which the effectiveness of this stimulation is not varied. The response to this continuous and ever varying stimulation is not always evident, but occasionally its intensification renders the responses so strong that a marked reaction follows.

Pathogenesis of Asthmatic Attacks

Accepting the theory that the act of respiration is an involuntary reflex resulting from the stimulation of the afferent respiratory nerves, which stimuli arise both from within and from without the body, it is easily seen how in certain persons abnormal stimuli may produce abnormal reflexes. For, how else are the various phenomena which at times occur in these organs to be explained? Take for example the tinnitus produced in some people

by the inhalation of tobacco-smoke, or the drinking of ice water. This condition no doubt is a vasomotor disturbance. There is also the bronchial cough produced by instrumentation of the external auditory canal, nasal septum or middle turbinates; also the paroxysms of sneezing produced by irritating the scalp, upper lip or nasal septum.

Reflexes occur normally in all parts of the body, and exhibit themselves with exceptional force in patients of a neurotic character and in certain organic and functional disorders of the nervous system. In the asthmatic individual, the nervous temperament is one of the predominating features and is one which may be either hereditary or acquired. The inheritance of asthma shows itself in about one-half of the victims when three generations are taken into the computation. The disorder sometimes runs in families, particularly those with irritable and unstable nervous systems. In rare cases, it has been known to alternate, in the same patient, with migraine, hiccup or even with epilepsy. In other instances, occurring in neurotic stock, it has taken the place of the graver neuroses and psychoses in members of the same or succeeding generations.

This element is further shown by the periodicity of the attacks in many persons, and by their being brought on by mental emotions, such as worry, anger, fright, anxiety. Bishop states that an asthmatic attack constitutes a "nerve-storm," while its neurotic character is further supported by the fact that frequently patients experience irritability and nervousness just preceding or during an attack; the coordinate action of the muscles may be affected and they may complain of being ill-tempered and feeling jerky.

Another necessary element in this disorder is an irritable respiratory membrane, that is, a condition of hypersensitiveness of the sensory end-organs of these structures. It has been observed that nasal disorders may incite, produce, and prolong the attacks; frequently the attacks do not reappear when this source of irritation has been removed.

Some authorities maintain that all asthmatic patients have some kind of affection of the upper respiratory tract. About 22 percent of the subjects are known to have nasal polyps, while many cases are found where the middle or the inferior turbinates are so enlarged as at times to come in contact with the septum. Such conditions as hypertrophic rhinitis, deviation of the septum, spurs, ethmoidal and sphenoidal disease; sometimes, also, only a hyperesthesia of the nerve-end-organs of the septum or turbinates has been observed.

In the throat, especially in children, adenoids, hypertrophied tonsils, and elongation of the uvula have been found as exciting causes. Another feature may be an irritable bronchial mucous membrane in chronic catarrhal processes; but this undoubtedly is an extension of conditions existing in the upper respiratory tract. Given these pathological conditions, abnormal reflexes may arise from the added irritation from damp or cold air, dust, gases, pollens, odors from plants or animals, perfumes or irritating chemicals.

Conditions more remote have also been known to produce the attacks, as, for instance, irritation of the eyes from gas, electric or bright sun-light; also irritation from middle-ear disease. On the other hand, so many middle-ear troubles result from nasal conditions that it is doubtful if the ear condition alone is the cause. Sometimes these attacks have been produced by irritation from the stomach or the genital organs, many women showing Leyden's crystals and spirals, and in these the asthmatic attacks occur only during the menstrual periods. Patients of this latter class have been cured through the correction of uterine misplacements. Some patients show irritability of the pneumogastric nerves, following whooping-cough, measles or infantile bronchial disorders, or through the pressure of enlarged glands, as in tuberculosis, syphilis, tumors, or a persistent thymus.

The sudden onset of peripheral disorders, including eczema, urticaria and psoriasis, is thought to be a causative factor, by acting on the sympathetic system. Other factors that may influence this condition are errors of diet, ill nutrition, obesity, and lymphatism.

Is Autointoxication a Factor?

Some authors advance the theory that the disease is due to an autointoxication or to an excess of uric acid in the blood; the latter, Bishop also claims to be the cause of hay-fever. Haig maintains that the uric acid in the blood contracts the arterioles all over the body and produces a high arteriole tension. He considers that asthma represents the effects of this contaminant upon the thoracic circulation, while epilepsy may be the expression of its influence upon the circulation of the brain. The asthmatic attacks usually occurring during the night, he claims that this is because the blood is more toxic at that period than during the daytime.

In this theory it might also be assumed that the excess of uric acid or other toxins in the

blood serves to bring about a hypersensitiveness of the nerves, so that the respiratory reflex reacts abnormally when excited by various irritants. This idea is also borne out by Ballenger, who states that "hay-fever, laryngeal cough, sneezing, bronchial asthma, and anesthesia and hyperesthesia of the mucous membranes of the ear, nose, and throat are reflex phenomena, which may result from the irritation of the nervous system by the toxic material in the blood."

Various theories have been propounded to explain the dyspnea of an asthmatic attack; but the prevailing one of today is, that primarily it is the result of spasm of the smaller bronchi, as taught by Laennec and others; and, secondarily, of spasm of the muscles of the thorax and of the diaphragm, which become unable to expel the air in the alveoli owing to the restricted lumen of the bronchi.

The reduction in the number of respirations would tend to demonstrate that the resistance to the egress of air is the main cause of the difficulty. The expired air shows an increase of about 10 percent in carbon dioxide, and it contains little or no oxygen in marked cases, the blood having absorbed all that is contained in the increased residual air.

This compensatory effort is not sufficient, however, to satisfy the demands of the system for the oxidation of the tissues. Imperfect action of the chest-walls often is the result of momentary paresis of the muscles, because of the absorption of carbon dioxide. Thus, the impeded respiration produces an excess of carbon dioxide in the blood and also gives rise to abnormal stimulation of the vagi. This action and reaction are further influenced by (1) the reciprocal effects of an accumulation of carbon dioxide in the central nervous system and a retardation of the circulation; and (2) by the rapid production of carbon dioxide in the organism in consequence of the powerful efforts required for the movements of respiration. Thus, in an asthmatic attack we have internal as well as external factors that help aggravate the condition.

Reviewing the foregoing statements, we must consider that asthma is no doubt a reflex neurosis depending upon a number of conditions; namely: (a) the nervous temperament, (b) heredity, (c) an irritable respiratory membrane, (d) pathological conditions of the nose, throat or bronchi, (e) environment or abnormal stimuli, and (f) possibly an autointoxication.

All these factors depend one upon the other, to a great extent, for no one factor is capable of producing the disease by itself, a combination of two or more being necessary. In many cases asthma is known to have been cured: hence, every victim should be subjected to a thorough examination of the entire respiratory tract, in order to locate, if possible, the exciting causes. If pathological conditions are discovered, they should be corrected, if possible, and any contributary causes removed, for then you often may eliminate the stronger factor producing the disease by breaking the abnormal reflex-chain.

The Treatment of Asthma

The treatment of asthma is both of a local and a constitutional nature. The local treatment mostly is confined to the upper respiratory passages. Reflex irritation from the nose is a very common cause of hay-fever, which mostly is connected with spasmatic asthma, and this often may be prevented by smearing the inside of the nares with a viscid ointment, such as that of zinc oxide, or by rendering the nasal mucous membrane less sensitive by the application of cocaine. The inhalation of medicated smoke is useful, the commonest and cheapest being the fume that arises from burning blotting-paper that has been dipped in potassium-nitrate solution and dried. Occasionally the addition of a little potassium chlorate to the nitrate solution seems to render the fumes more effective.

Among the various internal remedies extensively used for the treatment of asthma, is potassium iodide in large dosage, and sometimes this acts like a specific. I am very much pleased with the effects of tincture of lobelia in doses of 10 to 20 minims, combined with belladonna. The asthmatic attack usually demanding immediate and prompt treatment, I give a few whiffs of chloroform, which produces a prompt relaxation; then follow up with small doses of morphine.

Asthmatic patients should stay indoors, and guard against outdoor air in stormy days, which brings about the attack in most cases. As to climate, it is very difficult to lay down rules for asthmatics; but, the dry and high altitudes are more beneficial than the seashore.

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[Doctor Johns' interesting paper brings to my mind one interesting point, which is developed by Dr. Thomas Lewis of London. (See page 247, this issue.) He thinks dyspnea due to acid intoxication.

One remedy which we should like to see tried more extensively for the relief of asthmatic attacks is lobeline sulphate, hypodermatically. Solis-Cohen reports remarkable relief from the use of aspidospermine. More remedies of this class should be tried.—ED.]

What Others are Doing

PURULENT WOUNDS TREATED WITH SUGAR

Having satisfied himself, first, that commercial (German beet-) sugar is free from pathogenic germs, and, second, that saccharine solutions retard the growth of germs, if concentrated even killing them, Doctor Magnus (*Muench. Med. Woch.*, 1913, p. 406) began to use it in dealing with infected wounds. The results have been very encouraging. The sugar, he explains, causes a pouring out of serum, thus washing the floor of the lesion from the inside; the smeary coating is loosened, the fetid odor disappears, and conditions for healing are established. Only in tuberculous wounds the method proved a complete failure.

SUGAR AS A SUBSTITUTE FOR SOAP

In a little article in the January number of *The Medical Council*, Douglas H. Stewart recommends the use of ordinary granulated sugar in the place of soap for the cleansing of hands and of wounds. Some time ago he made a series of culture experiments. After washing his hands with soap and water, he found that the skin invariably revealed the presence of pathogenic germs even after the most strenuous scrubbing. Then he substituted washing the hands with sugar for five minutes, followed by five minutes' washing with chloride of lime and water. At present, it appears, he uses just sugar alone, and finds it an efficient as well as convenient antiseptic.

His advice to the doctor is, to clean his hands with granulated sugar, and also to dress wounds with it, if nothing better happens to be available. Try it, he says, for the removal of paint or plaster-paris, also to remove oil, grease or vaseline mixed with dirt. A little soap may be used first for mechanical cleansing, after which sugar and water followed by chloride of lime and water will render the hands or the skin sterile. If it is desired, the sugar may be scented, of course; thus, a little oil of geranium may be added for esthetic purposes.

Finally, granulated sugar, being gritty, takes the place both of soap and water, yet, leaves the skin unscratched, soft and smooth; and, while there are some skins which will not stand sugar, there are more which are intolerant to soap. The epidermis of an average person is much less liable to crack or chap in winter after this sugar treatment than when soap is used.

SUGAR AS A CURE FOR ALCOHOLISM

A novel suggestion for the treatment of alcoholism is that of B. L. Spitzig (*Jour. Amer. Med. Asso.*, Jan. 17, 1914, p. 193), who believes the development of the alcohol-habit to be due to the diminished supply of sugars ingested by these individuals. He states that as the supply of alcohol is increased the desire for sugars is correspondingly decreased, until the time comes when alcohol is taken in preference to the carbohydrates.

Spitzig goes about the treatment of these chronic cases by prescribing a sugar-rich diet, such as cereals with cane-sugar, sweet fruits, pastries, chocolate, and ice-cream. When there is a decided distaste for sugar, treatment may be begun by the administration of lactose as a medicinal powder, giving a dram every two hours; later, sugar being added to the diet as the desire for alcohol is alleviated.

Doctor Spitzig removes the accumulated poison by means of cathartics and diuretics, and gradually weans the patient from alcohol by the substitution of highly sugared liquors for the ordinary beverage. Capsicum and nux vomica, in combination, sometimes are necessary during the first week, to allay the gastric irritation.

VERONAL POISONING, WITH RECOVERY

The London *Lancet* reports a case of poisoning with veronal, the amount taken being 56 grains. These were some of the symptoms described: The pupils were widely dilated, but responded slightly to light; knee jerk and plantar reflexes were present; the victim was very ataxic and semiconscious, but did not recognize people; wandering in talk, slept

most of the day; almost pulseless; heart action feeble and intermittent, and rapid. During the third night he had four epileptic convulsions. Recovery ensued after five days.

AFTER-TREATMENT OF OPERATION FOR FISTULA

After describing the technic of the operation for the removal of fistula in ano, P. Lockhart Mummery (*Lancet*, July 12, 1913, p. 72), makes some interesting suggestions concerning the after-care of these patients. He states that the dressings should be changed twice a day. He lets the patient sit in hot baths containing a little antiseptic; the dressings soak off in this bath, when the nurse washes the wound with a weak phenol solution and redresses it. Thus the dressings are changed twice daily and sometimes oftener —always, of course, after the bowels have acted.

The wound never should be plugged after an operation of this kind, but a small flake of sterilized wool should gently be laid in the deeper part of the wound, so as to prevent premature healing of the more superficial parts; great care being taken to preserve the delicate new skin at the growing edges of the wound. One of the best dressings at this stage is wool soaked in sterilized oil. The oil protects the delicate granulations and prevents their being damaged when the dressings are removed.

If the wound shows a tendency to stop healing, a stimulating dressing should be applied, such as pure ichthyol, red wash or Friar's balsam, but these should not be put on too frequently. When nearly healed, nothing at all is put in the wound, but a pad of wool is tied over the anus. The patient should not be allowed to sit up or walk until the wound is soundly healed.

VERTIGO: SIGNIFICANCE AND TREATMENT

Vertigo is an exceedingly common symptom, but it is not always easy to ascertain its exact cause; hence, because of the lack of this knowledge, treatment often is likely to be unsuccessful. Some light is thrown upon the subject by a paper in *The British Medical Journal* (Nov. 8, 1913, p. 1219) by Dr. J. S. R. Russell. We give in brief the various causes for this condition as mentioned by Doctor Russell:

1. Aural vertigo. This is the most common cause of the more severe forms. The most important accompanying symptoms are tinnitus or deafness, or both; tinnitus, however, being the more constant. Neurasthenia may result in vertigo, but sometimes neurasthenia may cause symptoms simulating true aural vertigo. These symptoms generally are unilateral.

2. Arteriosclerosis of the cerebral vessels may cause vertigo. Important accompanying symptoms are headache, a sense of fulness in the ears (this being bilateral, not unilateral as in aural vertigo), and a full, bursting sensation, which is referred to the head in general, and not particularly to the ears. The absence of impairment of hearing favors the diagnosis of arteriosclerosis. It should be remembered that symptoms of intracranial tumor may simulate those of the condition described. Investigate the retinal vessels, the blood pressure, and the constituents of the urine.

3. Ocular vertigo. There is no doubt that eye troubles and ocular defects may cause vertigo, although the author is skeptical as to the influence of errors of refraction. Certainly acute paralytic affections of the eye-muscles may cause this symptom.

4. Gastric and hepatic vertigo are not uncommon. In these cases there are evidences of derangement of the stomach or liver, such as vomiting, for instance. The order of onset of symptoms is important: in these cases the gastric symptoms antedate the vertigo and other symptoms, while, when the vertigo is cerebral or aural in origin, vertigo occurs before nausea or vomiting.

5. Epilepsy is a common cause of vertigo, the well-known aura, or preconvulsive stage, being the most striking symptom. In pronounced cases of epilepsy the convulsion renders the diagnosis easy. When convulsions are absent, diagnosis is more difficult. There is not the same tendency for giddiness to persist after the return of consciousness in epilepsy, as is the case with aural vertigo after the patient has regained possession of his faculties. The sphincters never are relaxed in aural vertigo, as may happen in epilepsy. After an epileptic attack, however slight, the patient frequently falls asleep; but this symptom is not necessarily typical. Tinnitus may occur during the epileptic aura, but it does not persist in the intervals between attacks, as in aural vertigo, and the symptoms of deafness or fulness in the ears, which may usher in an attack of epilepsy, do not often persist.

6. Intracranial tumor may cause vertigo when the tumor is situated in the cerebellum or in its vicinity. It is only in the absence of optic neuritis that difficulties of diagnosis are likely to occur in these cases, which are not always easy to differentiate from arteriosclerosis. Investigate the retinal field and look for evidences of renal disease. The existence of facial paralysis in conjunction with deafness and in the absence of suppurative disease of the middle-ear is reliable evidence of intracranial mischief, such paralysis of the facial nerves never occurring with aural vertigo except when the middle-ear is suppurative.

7. General diseases of the nervous system, such as disseminated sclerosis, occasionally may cause vertigo. Nystagmus is common in this affection and in aural vertigo; but diplopia, so frequently complained of in disseminated sclerosis, does not occur in aural vertigo. Defects of vision, defective action of the sphincters, a tendency to incontinence of the urine, and alteration of the tendon jerks are common symptoms of disseminated sclerosis.

The treatment of vertigo will, of course, depend upon its etiology. Rest and the avoidance of movements of the head are important factors, and sedative drugs are of value in all cases except when the eyes are at fault. The bromides are particularly praised by Doctor Russell, although he makes use of quinine in aural vertigo.

Of course, ocular vertigo calls for correction of the eye trouble, gastric and hepatic vertigo require attention to the alimentary canal, and the other diseases mentioned call for the indicated remedies.

LARKSPUR LOTION FOR PEDICULOSIS

Apropos of the recent discussion of the treatment of lousiness—more gentilely denominated pediculosis, pediculation, and phthiriasis—in which stavesacre was mentioned, a suggestion for preparing such a head-wash may interest some of our readers. The formula was published by O. Raubenheimer in *The American Druggist* of New York City, in which latter community, it will be remembered, the school-board is sore put to it to eradicate the pestiferous pediculus capitis nurtured by un-Americanized immigrant citizenry.

The formula: Larkspur-seed, in coarse powder, Gm. 100; acetic acid, Cc. 50; glycerin, Cc. 50; alcohol, Cc. 100; water, to make Cc. 1000. Put into a flask 800 Cc. of water and the acetic acid and glycerin, close the vessel and boil for ten minutes. When cold again, add the alcohol and let stand for a day. Then filter, and pass through the filter more water, to complete 1000 Cc.

STAPHISAGRIA, DELPHINIUM AND DELPHININE

Mr. Raubenheimer terms his louse-exterminator (described in the preceding item) lotio calcatrippæ or, in the vernacular, larkspur lotion. This suggests a few remarks anent this practically forgotten drug.

Larkspur is a native of Europe, and its botanical name is delphinium consolida, with the synonyms of consolida regalis and consolida calcatrippa.

Stavesacre, also a European (south) plant, is a closely related species, being known, botanically, as delphinium staphisagriæ (or macrocarpa), the seeds bearing the suggestive name of semina pedicularis (German, "laeusesamen").

There are a number of other species of delphinium, all of which are possessed of similar properties, the predominant active constituent being the alkaloid delphinine in relatively greater or smaller percentage, staphisagria being considered the strongest among these plants. The seeds are the portion commonly used, although the roots and the herb also contain the alkaloid. Other alkaloids identified are: delphisine, delphinoidine, staphisagrine, staphisagroine.

Delphinine is a powerful irritant poison, somewhat resembling aconitine in its action, although stated to be much less poisonous, and it has been employed (sporadically) in neuralgia. It affects respiration similar to aconitine and depresses the circulation, without being a heart-poison. Lethal dose for a cat or dog is 1.5 mg. Delphisin kills these animals in doses of 0.7 to 1 mg. Felter gives the therapeutic dose as 1-60 to 1-10 grain, to effect. Delphinoidine is less toxic than the two preceding alkaloids. We have no record of any physiologic tests with the other principles. But one more item of interest is the assertion by Heyl and Lohmann (1903) that delphocurarine might serve as a complete *substitute for curarine*. This alkaloid (now declared to be a mixture of several principles) is a constituent of delphinium bicolor and of several other species.

Staphisagria scarcely is heard of these days; still, bearing in mind the powerful specific properties displayed by the various principles, it does seem a pity to let this drug go by unnoticed without giving it a complete try-

out. The very fact that delphinine influences the nerve-centers similarly to aconitine, yet, in different degree and lacking certain properties, would seem to promise for it an important place in the battery of therapeutic weapons. Similar to aconitine—yet, not the same!

Moreover, a glance at Eclectic materia medicas quickly demonstrates that some men have ascribed to staphisagria remedial value compassing a wide range, not merely in neurologic practice but in other directions, even in dermatology. In proof, the reader is referred to Lloyd's American Dispensatory, and to the Materia Medicas of Webster, Ellingwood, and Scudder. The latter—more conservative—summarizes its properties about as follows:

It influences the lower pelvic organs; useful in diseases of the male and female genitourinary organs where there is mucous discharge, as also in similar conditions of the rectum; beneficial in spermatorrhea, nocturnal emissions, prostatorrhea, and urethritis. Other affections mentioned (by Felter) are: hysteria, hypochondria, vomiting of pregnancy, ophthalmia. While many of these and the other uses mentioned by older writers presumably can not be defended, it seems that, in general, by whatever name paraded, the successful employment of this drug has been where the circulation, and especially irritated and painful nerves, had to be influenced.

As a matter of interest, the following statements in the fourth edition (1839) of the United States Dispensatory may be appended: Larkspur, seeds and roots, (delphinium consolida) is esteemed as a diuretic and is useful in asthma and in dropsy. The flowers formerly were believed to heal wounds; hence, the name consolida. The native species, D. exaltatum, possesses similar virtues.

Under Staphisagria, we are told that the seeds formerly were used as an emetic and cathartic, but have been abandoned in consequence of their violent action. The powder, as a salve, is employed in cutaneous diseases. The infusion is used like cocculus for poisoning fish. Delphia [delphinine] affects the nervous system; Turnbull giving the "pure delphia" to the extent of "3 or 4 grains a day, in doses of 1-2 grain each, without exciting vomiting, although at times purging." [His delphinine must have been very impure!—ED.] It acts as a diuretic and produces tingling all over the body. Externally, Turnbull said the "delphia" acted like veratrine, producing more redness and burning, but less tingling. He employed it in neuralgia, rheumatism, and paralysis, considering it preferable to veratrine in the latter affection. He dissolved from 10 to 30 grains of the "alkali" (sic!) in an ounce of lard or alcohol, applying this with friction until skin tingling is felt.

This note on Turnbull's statements we find carried forward unchanged to the very latest edition of the Dispensatory. Many famous chemists and pharmacologists, including Kobert and Dragendorff, have concerned themselves with these substances, but nothing practical has come of it. There can be little doubt that the same awe that forbids clinical experimentors even today to touch aconitine has deterred physicians from approaching the alkaloids of the delphinium group.

"LAUNDRY WORK" FOR THE BLOOD

The story of the achievements of some of our medical investigators reads like a romance, or at least it would could we divest it of its technical phraseology and put it in language which the ordinary man can understand. Take, for instance, the wonderful experimental work conducted by Abel, Rowntree and Turner upon the removal, by means of dialysis, of diffusible substances from the blood of living animals, as reported in the January number of *The Journal of Pharmacology and Experimental Therapeutics*, and already referred to in the newspaper press.

The very ingenious apparatus devised by these men for the purpose named, consists of sixteen connecting celloidin tubes, all enclosed in a large glass jacket like a Liebig's condenser, provided with an inlet for attachment to the carotid artery on one side of the neck, and an outlet for attachment to the jugular vein on the opposite side. With this apparatus, the experimenters have succeeded in washing the blood of dogs so as to remove various toxic or other diffusible substances, thereby relieving the kidneys from their burden of work. In fact, the apparatus constitutes an artificial kidney, having the advantage that it can be used to remove any desired substance, while its work can be kept under control.

The method of operation of this "blood-laundry-machine" is as follows: The connecting celloidin dialyzing tubes (most chemicals pass readily through celloidin, but not colloids) are filled with a physiologic saline solution. They are tightly enclosed in the glass jacket, which also is filled with this

solution. The collecting ends of the system of tubes are then connected with the artery and vein, respectively, and by means of an ingenious apparatus a small amount of hirudin is admitted near the arterial connection, this leech extract preventing the coagulation of the blood. When the body connection is completed, the blood rapidly displaces the saline solution in the tubes, flows through the washing apparatus, and is readmitted to the body of the animal at the external jugular.

It is surprising to learn that for short periods a dog will tolerate the removal from the body into the dialyzing apparatus of as much as 40 Cc. per kilogram of body-weight of the mixed blood and saline solution for a short time, while 30 Cc. may be kept in the tubes for several hours without causing the death of the animal. Expressed in terms of the human body, this means that from four to five pounds of diluted blood could be outside the body for a time, though connected with it.

Such substances as urea, sugar, phosphates, the toxic sulphur bodies, amino acids, and other normal or abnormal constituents of the blood will dialyze through the tubes into the surrounding fluid. However, any constituent of the blood which it is not desired to remove from the body, can be retained in the tubes by adding to the fluid in the jacket the proper portion of urea, sugar, sodium chloride or whatever may be required.

Experiments were made upon dogs with regard to the possibility of recovering salicylic acid from the blood when this remedy or its salts was introduced into the blood. In every instance it was found that the apparatus did practically the same amount of work as the kidney itself, so that its possibilities as a cleansing agent are apparent, considering that it has not yet been perfected and is capable of great improvement.

As yet no records are given of the use of this apparatus in the treatment of human disease, but it would seem entirely feasible and quite safe to use this or some similar apparatus in the treatment of various grave intoxications that now too often defy the efforts of the physician. "Washing the blood" should prove useful in the treatment of uremia, the acid intoxications of diabetes, the intoxications due to the retention of bile and its by-products, and in many other conditions in which harmful metabolic products are retained within the body. Furthermore, the apparatus temporarily reduces blood pressure. Also, it *might* be used to introduce drugs into the blood.

This discovery certainly opens a new and enticing field and promises to be the means of alleviating the symptoms of some of our most dreaded diseases, and possibly of effecting cures.

IS THERE HOPE FOR THE TABETIC AND PARETIC?

The researches of Noguchi, completed within the last twelve months, have demonstrated that in the case of general paresis of the insane and probably also in tabes dorsalis we are dealing, not with a parasyphilitic disease, but with a real, active infection with the spirocheta pallida. But why, then, do these patients resist treatment with the ordinary specific remedies, and especially with salvarsan? The answer to this question is furnished by Swift and Ellis in *The Archives of Internal Medicine* for September, 1913 (p. 331).

In this paper, it is declared that the lack of success in brain syphilis is due to the fact that the cerebral areas are inaccessible to remedial agents circulating in the blood, as ordinarily administered. Unfortunately, when salvarsan has been introduced into the cerebrospinal canal of animals, it has produced directly harmful results; thus, contraindicating its employment in this manner in the treatment of cerebral syphilis. Swift and Ellis have devised, however, a method of treatment which overcomes this disadvantage and has given some most encouraging results in highly discouraging cases. This method of treatment, together with a number of illustrative cases, is published in detail in two papers written by Hough and McCaskey (*Jour. Amer. Med. Asso.*, Jan. 17, 1914, p. 183).

This method consists in the intravenous administration of neosalvarsan, with subsequent withdrawal of the patient's blood, and the reinjection of the serum obtained from it into the cerebrospinal canal. The technic is as follows:

One hour after the intravenous injection of from 0.3 to 0.9 Gram of neosalvarsan, 50 to 60 Cc. of the patient's blood is withdrawn by means of venous puncture, the clear serum is separated, diluted to 40 percent with normal salt solution, heated to 56° C. (132.8° F.) for half an hour, then kept in a cool place until the following day. Before using, it is warmed to body-temperature and then injected into the subarachnoid space by means of lumbar puncture, after first withdrawing about 15 Cc. of the spinal fluid, the amount of fluid injected being 30 Cc. The serum is

injected slowly, without much pressure. The patient is kept in bed for twenty-four hours, with head lowered. From eight to ten treatments of this kind are given, every second week; then, after an interval of rest, renewed, if necessary, as indicated by the Wassermann and other blood tests.

CARDIAC AND RENAL ASTHMA

In an address at the University College Hospital of London, published in *The British Medical Journal* (Nov. 29, 1913, p. 1417), Thomas Lewis advances the interesting hypothesis that the paroxysms of dyspnea—or "asthma," as it is called—occurring in cardiac and renal disease, are due to a diminished alkalinity of the blood; in other words, that any increase in the acidity of the blood interferes with respiration and leads to asthmatic attacks. The asthma ceases when the blood becomes more alkaline. The dyspnea of violent exercise is due to an acid, in such cases to lactic acid. Diabetic asthma is the result of diacetic and oxybutyric acid.

Doctor Lewis is of the opinion that acidosis is the cause of dyspnea in a very large number of the patients found in our hospital wards. Also, it seems probable that in many cases this form of intoxication accounts for the increased pulse frequency and loss of cardiac tone. He describes two forms of acidosis, that due to a volatile acid, and that due to some nonvolatile acid. He believes that this classification and these facts regarding the etiology have considerable practical significance; however, he does not go deeply into the method of treatment.

To readers of CLINICAL MEDICINE, the value of alkalis and alkaline combinations in many of these asthmas, whether of cardiac or renal origin, or due to some other cause, will immediately suggest itself.

ANAL FISSURE CURED WITH TINCTURE OF IODINE

Patients suffering from anal fissure are now generally sent to the operating-table for cure, but Maschat (*La Province Médicale*, Dec. 20, 1913, p. 565) declares that this "complicated and brutal" method of treatment is unnecessary and that these patients can be cured by the application of a very simple remedy, namely, tincture of iodine. Maschat has employed this method for fifteen years, and has always succeeded with it, he tells his readers.

The site of the fissure having been determined, Doctor Maschat informs his patient that he is going to apply a dressing that will cause a little pain for a few minutes, but will effect a cure; if they are not willing to submit to this, then they must submit to an operation. They invariably prefer the cauterization.

With the help of an assistant, he exposes the fissure, cleans it with cotton dipped in boiled water, and then paints it thoroughly with tincture of iodine, and that is all. This treatment is repeated three or four times at three- or four-day intervals. From the first day, pain is reduced, and after the third cauterization the cure is complete and permanent. The pain, while a little severe, especially at the first application, lasts only a few minutes, and is always easily borne; so well, in fact, that only very rarely is it found necessary to make cocaine applications. Every patient whom Maschat has seen and treated has been cured by this method. In one instance, the patient returned to him after some years on account of a recurrence of the trouble, but three applications restored him completely.

EMETINE WILL STOP HEMORRHAGE

In a most excellent résumé of the recent developments in emetine therapy, published in the *Gazette des Hôpitaux* for December 23, 1913 (p. 2318), Brelet gives some very interesting facts concerning the use of this drug in the treatment of hemorrhages of various kinds.

Emetine, it appears, is now considered probably the most effective remedy in the treatment of hemoptysis. It was the fact that, in cases of amebic abscess of the liver treated with emetine hydrochloride the pus ceased to become reddish and bloody, that suggested its employment for this purpose—this, and the fact that Trousseau recommended ipecac in the treatment of hemoptysis.

Flandin and Joltrain reported, to the Medical Society of Hospitals, striking successes with this drug in this condition. Some weeks later, Flandin reported seven other cases, and then Lesné, Rénon, Léon Bernard and Paraf, and Josué and Belloir gave the method a trial and all had excellent results. Flandin alone has personally seen twenty cases of hemoptysis successfully treated with emetine. (Société Médicale des Hôpitaux, July 18.)

The method of employment is the same as in dysentery, the emetine hydrochloride being

injected hypodermically in 1-2- to 2-3-grain doses. Even when the bleeding is at its height, the hemorrhage is arrested almost instantaneously; and this result is obtained with the emetine without the patient's presenting any of the distress, nausea or vertigo so frequent when the condition is treated with ipecac in large doses. During the twenty-four to forty-eight hours following the injection, dark-colored sputum continues to be raised, as is usual after hemoptysis.

It should be added that this remarkably effective and rapid alleviation of hemorrhage following the emetine treatment is not always maintained for a very long time, so that Flandin advises repeating the injection every three or four days, while in some cases it is even advisable to repeat the injection daily until the condition is completely under control.

How the drug arrests the hemorrhage is still unknown. It does not modify the arterial pressure, neither does it increase the coagulability of the blood, nor does it cause any change in the number of the red or white blood-cells. Lesné is of the opinion that it acts directly upon the pulmonary circulation through the vasomotors.

Several other French physicians have reported the employment of emetine in other forms of hemorrhage, as for instance that occurring in typhoid fever, also in uterine hemorrhage, hemorrhage occurring in cancer of the intestine, and other forms. There is considerable diversity of opinion as to its value in cases of this kind. Thus, Ramond, for instance, declares that following the subcutaneous injection of emetine hydrochloride in 2-3-grain doses "intestinal hemorrhage ceases as by enchantment," but not all investigators have observed equally happy results.

Upon one thing, however, practically all these observers are agreed, namely, that in the treatment of pulmonary hemorrhage we have in emetine hydrochloride, administered hypodermically, probably the most valuable remedy thus far introduced.

RADIUM IN INTERNAL MEDICINE

Judging by the quantity of literature upon the subject, radium is a remedy which must be reckoned with in the future. According to Rowntree and Baetjer (see *Jour. A. M. A.*, Oct. 18, p. 1438), this remedy increases the uric-acid output and brings about the disappearance of tophi or other deposits; causes a reduction of blood pressure even to the exten of from 20 to 25 mm.; causes an increase in the number of red blood-cells, and a temporary but considerable leukocytosis; increases the volume of the air breathed, the oxygen consumed and the carbon dioxide expired, thereby raising the respiratory quotient; has an accelerating influence upon the coagulation of blood; and, finally, increases the activity of ferment production—influencing favorably the flow of pepsin, pancreatin, rennin, diastase, and other digestive enzymes.

A large number of case-reports are collected by the authors, in which good results are based upon the use of radium in various diseases, among them arthritis deformans, chronic rheumatism, gout, neuralgia, lumbago, neuritis, and tabes dorsalis. The number of cases reported by Rowntree and Baetjer themselves is relatively small, and, while good results were obtained, they are not as flattering as those reported by some of the more enthusiastic observers.

Radium is now administered in a number of ways, including: as a bath, in certain radioactive springs; subcutaneously, in the form of water charged with emanations; in the form of cotton compresses soaked with radioactive water; by drinking the radium emanations in water solution; by inhalation in an emanatorium—an airtight cabinet into which radium emanations have been introduced.

The authors state that the value of radium is unquestionably established in various forms of arthritis, in gout, sciatica, neuralgia, neuritis, and the pains of tabes.

PERHYDRITE: A DIOXIDE-YIELDING POWDER

Perhydrite—chemically united hydrogen dioxide and carbamide—is presented to the profession ("Merck's Annual," 1912) as a handy source of hydrogen dioxide. It constitutes a white, odorless, comparatively stable powder, which, dissolved in water (2 : 5), is instantly decomposed into its constituents; yielding a fresh solution of the dioxide, with the presence of the (harmless and generally unobjectionable) carbamide, or urea. In order to obtain a 1-percent solution, 1 part is dissolved in 30 parts of boiled water; 1 : 10 yielding a 3-percent preparation. The water may be warm, this increasing the activity.

Aside from the advantage of such a powder already indicated, there is the further obvious one of convenience in carrying in the satchel for the visiting doctor and surgeon, as well as for patients on a journey who use it as a

gargle, mouth-wash or wound-disinfectant; while it may serve also for sterilizing instruments, for instance. Moreover, the perhydrite powder constitutes an excellent disinfectant for wounds when employed as a dusting-powder, either alone or in combination.

PROGNOSIS AND TREATMENT OF TETANUS

In a review of the serum treatment of tetanus (*Therapie der Gegenwart*, 1912, October, page 444), Prof. Fr. Rolly concludes, from the experience of various authors whom he cites, that the prognosis of tetanus is favorable in those cases in which the incubation is more than fourteen days, but that the patient will succumb to the disease if the tetanic symptoms occur after an incubation of only seven days.

In the former contingency recovery may be expected even if no antitetanic serum is administered, and in the latter it is probably impossible, in spite of the administration of the serum.

Prof. Rolly assumes that in cases in which the tetanic symptoms occur promptly a fatal amount of toxin is bound so firmly to the nerve-cells that the antitoxin which is introduced with the serum is no longer capable of neutralizing it.

From the experience of various authors in the treatment of tetanus with serum, Rolly concludes that a combined serum treatment is probably most advantageous in tetanus. As soon as the first symptom of the diseases appear, an intralumbar injection of antitoxin should be administered, and at the same time "curative" serum, or normal serum, should be injected intramuscularly around the wound or wherever possible into the nerve. The latter injections should be repeated on the following days.

A CASE OF TETANUS

Walter V. Brem (*Jour. Amer. Med. Assn.*, Jan. 17, 1914) reports a case of tetanus treated successfully according to the "rational" method of Ashhurst and John. (See *Amer. Jour. Med. Sciences*, Aug., 1913, p. 77. Abstract follows.) The patient in this case was injured on the upper lip by a baseball and, after a six-days' incubation period, developed, slowly, a typical attack of cephalic tetanus, a type of the disease in which the prognosis usually is bad.

Treatment was begun two days after the first appearance of symptoms, which fortunately developed slowly. Following the suggestions of Ashhurst and John, the tetanus antitoxin was given, not only by the usual routes, but was injected into the sheath of the left facial nerve, after which the surrounding tissues were infiltrated; also intraspinal injections were made, after lumbar puncture; and, finally, the antitoxin was introduced intravenously. In all, this patient received 98,000 units, 23,000 by intraspinal injection, 60,000 by intravenous injection, 8000 by subcutaneous injection, and 2000 by infiltration of the tissues about the site of injury.

The happy result, in the author's opinion, supports the contention of Ashhurst and John as to the desirability of combating the neurotoxin of tetanus from every possible point of access. A peculiar feature of this case was the development of meningitis six hours after the first intraspinal injection. This was shown to be aseptic, that is, not due to the specific organism of meningitis.

THE RATIONAL TREATMENT OF TETANUS

The most important paper upon the treatment of tetanus that has been contributed to the medical literature of the last year was that of Ashhurst and John. (See *Amer. Jour. Med. Sciences*, Jul., 1913, p. 77.). As a result of the study of the different remedies employed in this disease, particularly antitoxin, the authors have worked out the following technic, which undoubtedly promises more for the cure of this deadly disease than anything heretofore devised. We urge our readers to employ it in every case of the kind they may be called upon to treat. It is as follows:

"The patient will be placed in quiet, with competent nursing facilities. As soon as possible after coming under observation, whether this be in the small hours of the night or at bright noontide, the motor nerves leading from the wounded part will be exposed, as near to the cord as practicable, and as much antitoxin as each will contain will be injected toward the spinal cord.

"For wounds of the sole of the foot, it is sufficient to inject the sciatic nerve; for those of other parts of the lower extremity, not alone the sciatic, but the anterior crural and obturator nerves as well, should be injected. For wounds of any part of the upper extremity, the brachial plexus should be exposed above the clavicle, and an injection should be made into each of its cords. These operations should be done under general

anesthesia, for which we prefer chloroform. A strong linen ligature is to be looped loosely around each of the nerves exposed; the ends of these ligatures are to be left long and used to identify the nerves and draw them up into accessible positions, for the purpose of subsequent injections of antitoxin, should these prove necessary.

"An intraspinal injection of at least 3000 units will then be made according to the usual technic for spinal anesthesia. If it is possible to prick the cord with the needle, so much the better. Next, the wound of entrance of the infection will be widely opened, all foreign bodies, sloughs, etc., will be removed by forceps, scissors or scalpel; the wound will be irrigated with hot peroxide of hydrogen, swabbed out with a 3-percent alcoholic solution of iodine and loosely filled with gauze soaked in the same solution, and injection of antitoxin will be made (1500 to 3000 units) deeply into the muscular tissues around the wound.

"Continuous proctoclysis, as used in cases of peritonitis, will be given; and by mouth or in the rectal fluid will be administered effective doses of chloral and bromides, at appropriate intervals. Feeding will be enforced; by the nasal tube passed under chloroform anesthesia, if necessary. During the course of the first day, a moderate amount of antitoxin will be administered intravenously; probably 10,000 units will suffice.

"The intraneural and intraspinal injections of antitoxin will be repeated daily, under chloroform anesthesia, until marked decrease in spasticity occurs. Every twelve hours, or less often, a moderate amount of antitoxin will be injected intravenously, or even subcutaneously, so as to neutralize the circulating toxins; but the main reliance will be placed on intraneural and intraspinal injections. The administration of spinal depressants will be continued as long as they are indicated; a comatose state or muscular relaxation naturally are contraindications. The wound will be dressed daily, as above described, until a healthy granulating surface is obtained.

"With such treatment, commenced within twelve hours of first appearance of symptoms of tetanus, we believe the mortality of the disease should not be over 20 percent. Of the 11 patients under our own care, 7 have recovered and only 4 died, a mortality of 36.36 percent. One of these deaths was caused by an overdose of magnesium sulphate. This patient did not come under observation until the fourth day of the disease, and none of the other fatal cases came under our care until more than twenty-four hours after the onset of indubitable symptoms of tetanus."

THE INORGANIC CONSTITUENTS OF CARCINOMATOUS LIVER

The interesting discovery has been made by A. Robin, of Paris, (*Muench. Med. Woch.*, 1913, No. 16), that carcinomatous tissue of the liver accumulates mineral salts of potassium, magnesium, silicon, and phosphorus, but at the expense of the normal sodium. This knowledge, Dr. Robin (in an address before the Académie de Médicine) declared, might open up a way for rational therapeutic investigations in this field, especially when coupled with the other fact, that cancerous liver fixes iodine, selenium, and organic arsenic. In this connection, he also reminds us that in tuberculosis the potassium in the organism is consumed. Clinicians now should aim to discover inorganic principles capable of uniting with the "receptors" of the substances composing the cancer-cell, and thus exert a modifying, curative influence upon the diseased organ.

THE TREATMENT OF HEMOPTYSIS

The use of morphine and opium in the treatment of hemoptysis occurring in the course of pulmonary tuberculosis is condemned by N. B. Burns (*Jour. Amer. Med. Assn.*, Dec. 20, 1913, p. 2207), who substitutes in its place a treatment in which vascular sedation and saline depletion are combined.

To this end, the patient is placed immediately in a reclining position, is reassured as to the dangers of pulmonary hemorrhage, and directed to keep absolutely still. Nitroglycerin (glonoin) is given in 1-100-grain doses, subcutaneously, as early as possible; then an ice-bag is placed on the chest over any painful point that can be ascertained. The patient is allowed to take cracked ice by the mouth. Providing the patient is not suffering from extreme weakness and there are no lesions of the digestive tract, he is given at once from 1 to 2 ounces of magnesium sulphate. Doctor Burns has not observed any danger resulting from nausea, vomiting and gagging following the use of this drug; still, it does occur to the editor that an effervescent preparation of the epsom salt might advantageously be resorted to.

The beneficial results of this treatment are seen as soon as the purgative action begins. Furthermore, in about eight to ten hemor-

rhages so treated there have been no recurrences, nor posthemorrhagic pneumonias, such as sometimes complicate large dosage with morphine. Doctor Burns is of the opinion that one predisposing cause to hemorrhage is severe constipation, while another cause is too high blood pressure, which is reduced by the profuse catharsis.

In this connection, we particularly want to call attention to the value of hypodermic injections of emetine, recommended so enthusiastically by our French confrères. Read the abstract on page 247. The two methods of treatment might be combined.

POTASSIUM-MERCURIC IODIDE: A POTENT AND SAFE ANTISEPTIC

In view of the numerous deaths which have followed the accidental or suicidal administration of mercuric-chloride in the form of tablets, the physician may well be excused if he seeks to find a substitute for that dangerous drug; and Douglas Macfarlan (*Jour. Amer. Med. Assn.*, Jan. 3, 1914, p. 17) advises the use of potassium-mercuric iodide. This compound is a definite salt, formed by the admixture of mercuric iodide and potassium iodide in the proper proportions. It is a deliquescent substance of yellowish color. The clear, metallic-tasting solution is permanent, and may be kept for months.

Potassium-mercuric iodide does not tend to coagulate albumin; but it is incompatible with the organic alkaloids. A 1-percent solution, when applied to the skin or mucous membrane, acts as a mild irritant, producing, when applied to the nose or throat, the characteristic picture seen in a sharp attack of hay-fever. This local irritant action may be overcome by greater dilution. This drug may be taken internally in comparatively large doses, without any untoward effect, from 15 to 18 drops of the 1-percent solution appearing to be well borne if properly diluted.

Most interesting are the studies as to the antiseptic action of this chemical. Macfarlan found that in the strength of 1 : 80,000 potassium-mercuric iodide solution rendered cultures of the bacillus typhosus, staphylococcus, bacillus lactis bulgaricus, bacillus acidi lactici, and sugary yeast solutions all sterile. Apparently, therefore, it is about five times as potent as an antiseptic as mercuric chloride (which, according to Park's table of germicidal strength, is effective in solutions of 1 : 14,000), twice as potent as mercuric iodide, and three times as potent as pure formaldehyde.

Macfarlan recommends its use as a general antiseptic, stating that, when greatly diluted, "its local effects and toxicity are insignificant, while its germicidal qualities still remain high." He says: "(1) The drug may be taken internally in doses of 5 drops of a 1-percent solution, without toxic effect. (2) A 1-percent solution has but slight irritant action. (3) A dilution of 1 : 80,000—or nearly one 1-1000th of 1 percent—exhibits marked germicidal powers."

He recommends its use in erysipelas, acne, pustular skin infections, lupus, psoriasis; also in infected burns, old leg-ulcers and ragged wounds of various kinds. Even when subcutaneous infections are involved, such as felons or boils, and there is as yet no pointing or definite formation of pus, a wet dressing with a 1-percent solution of potassium-mercuric iodide will usually reduce the course of the infectious process and sometimes abort it altogether. It is also an excellent agent for sterilizing instruments, the tendency to tarnish being overcome by adding to the solution a little sodium bicarbonate.

Potassium-mercuric iodide also is of service, used internally, in a variety of pathologic conditions. Thus, according to Macfarlan, it exerts a marked effect upon all catarrhal conditions of the mucous membrane, clearing up the socalled common cold, shortening the course of croup and modifying the infectious processes of the nose, throat, and bronchi. [For these conditions calx iodata is to be preferred.—ED.] He has used it locally in atrophic rhinitis, applied with a swab or spray, with good effects, and also in a number of cases of frontal sinusitis. He further states that the French have used this drug for a long time in treating syphilis and skin diseases, the prescription of preference being widely known as the "one, two, three mixture," the formula for which is: 1 grain of red iodide of mercury, 2 grains of potassium iodide, and 1 ounce of solvent, either water or alcohol.

SODIUM BICARBONATE IN SHOCK

A simple remedy for the treatment of shock, which seems to be of decided value, if we may accept the conclusions of M. J. Seelig, J. Tierney, and F. Rodenbaugh (*Amer. Jour. Med. Sciences*, Aug. 1913, p. 195), is sodium bicarbonate. These investigators have made a series of studies upon dogs, to determine the value of remedies useful in the condition named. Without exception, every injection of a solution of sodium bicarbonate in animals in whom shock had been induced ex-

perimentally caused pronounced rise of blood pressure and increase of amplitude of the heart beat (without, however, any effect upon the rapidity of the heart's action) and an increase in the depth of respiration.

In their experiments, they injected 25 Cc. of a molecular bicarbonate solution. They noted that the increase of blood pressure and the increased amplitude of the pulse followed immediately after the introduction of the fluid, and both were well sustained for considerable although varying periods. The increase in the depth of respiration was so noticeable that it could be observed without the aid of tambour or drum.

Various hypotheses were suggested, to explain the effect of this simple remedy in shock, but none of them (bulk, hypertonicity, alkalinity or free carbon dioxide) showed itself to be the sole cause of the pressor effect of sodium bicarbonate, and the authors were finally forced, by exclusion, to assume that this salt acts specifically on the heart-muscle. The remedy is such a simple one that many physicians no doubt will be inclined to give it a trial in cases of this character.

FURUNCLES AND CARBUNCLES

In the treatment of furuncles, we often obtain most brilliant results when bacterins are employed, declares Jessie W. Fisher (*N. Y. Med. Jour.*, Sept. 6, 1913, p. 469). The invading organism is usually a staphylococcus. When a properly dosed bacterin is administered, the pain disappears within a few hours and the necessity for large incision is usually obviated; a small opening being all that is required, and this simply for drainage. Moreover, the smaller boils usually dry up and disappear without the necessity for opening. Treatment should be continued for several weeks after the active lesions have healed, in order to establish an immunity and to prevent recurrence. For those subject to boils on slight provocation, Doctor Fisher advises the preparation of an autogenous bacterin, which should be kept on hand and administered at the first indication of trouble.

Carbuncles usually are due to infection with the staphylococcus aureus, and, hence, the bacterin employed should, as a rule, contain this organism. If it be injected as soon as the lesion appears, it sometimes works almost like magic. No crucial incision is required, and the lesion heals with little scarring.

When, however, the lesion is advanced before the patient is first seen, difficulties are greater, of course; but even then the pain usually subsides rapidly, the discharge often is temporarily increased, and the entire necrotic tissue peels off within twenty-four hours, leaving behind a clean, granulating surface. Of course, when the individual's condition is at a low ebb, as for instance in some cases of advanced diabetes, or when the carbuncle involves a very large area, bacterin treatment may be of little avail. However, even in these desperate cases the remedy should be given a trial.

BACTERIN TREATMENT OF ECZEMA

While Jessie W. Fisher (*N. Y. Med. Jour.*, Sept. 6, 1913, p. 469) does not deny the importance of predisposing factors in eczema, she is strongly of the opinion that in some cases of this disease bacterin treatment is of real value.

Whenever an eczema is pustular or a microorganism can be isolated from the scales or the exudate, bacterins are a valuable adjunct to the treatment. Staphylococcus skin lesions, however chronic, are curable with remedies of this class. She reports the case of a patient (referred by Doctor Murphy, of Middletown, Conn.) who had suffered from eczema for years. He received bacterin treatment for furunculosis, and as a result the eczematous eruption disappeared and the patient remained well for more than a year.

In using staphylococcus bacterins, the dose should not exceed 300,000,000 at three- to five-day intervals, while streptococcus bacterins (when indicated) require only from 25,000,000 to 50,000,000 bacteria to the dose. This treatment need not interfere with any other line of medication, local or general, which it may be desirable to administer.

IODINE-BOTTLE WITH GLASS ROD FOR STERILIZING PURPOSES

A German military surgeon, Doctor Scheel, has devised a practical container for iodine solution to be used for sterilizing purposes (*Ther. Monatsh.*, 1913, p. 50). Doctor Scheel adopted the idea of a bottle already in use with a glass stopper prolonged into a rod extending into the liquid. In the present case, this rod is ribbed, so that the wrapping will not slip off, the wrapping here being asbestos wool. Obviously, this indestructible asbestos in the iodine always is sterile, thus rendering superfluous the carrying along (by the traveling surgeon) of aseptic cotton.

Miscellaneous Articles

The Grape That "Cheers But Does Not Inebriate"

TIME out of mind the grape has been employed both as food and drink, and until within comparatively recent years the latter has been in the form of fermented beverages. However, with the general acceptance of the idea that alcohol is more or less harmful, steps were taken to preserve the juice of the grape in such a way as to retain all the nutritive and other desirable constituents of the fruit without permitting the generation of alcohol. This object has been satisfactorily attained, and the market now offers a representative unfermented grape-juice that will keep well if properly handled.

Grape-juice, in that it offers everything contained in the fruit except the seeds and undesirable solids, gives us not only an admirable fruit-food but a most delightful refrigerant drink. In a mild way, the juice undoubtedly has somewhat of a medicinal action, since its contained tartrates act in a mildly laxative manner. It also exerts a marked tonic influence, but without the immediate stimulation produced by the alcohol of the wines, that is, the fermented juice.

The indications for the use of grape-juice are legion. It constitutes an admirable beverage in fevers, because it is a refrigerant and at the same time a food. It undoubtedly stimulates the renal function to some extent and thus favors greater elimination. Because of its mild acidity, it often overcomes nausea in certain conditions. It likewise stimulates the appetite. Moreover, as a "pick-me-up" for "katzenjammer" it is very effective. It also acts markedly in relieving "that tired feeling."

Not only is grape-juice applicable, in its original form, both as a beverage and a nutrient, but numerous combinations are made from it for use in the sick-room. Quoting from Pattee's "Practical Dietetics," we find the following recipes offered:

Albuminized Grape Juice.—Take 2 tablespoonfuls of grape-juice, white of 1 egg, sugar, and chopped ice. Put into a dainty glass the grape-juice and the beaten white of egg, and a little pure chopped ice; sprinkle sugar over the top and serve.

Grape Yolk.—Take 1 egg, 1 tablespoonful of sugar, 2 tablespoonfuls of grape-juice, and a speck of salt. Separate the egg. Beat the yolk, add the sugar, and stand aside while the white is being thoroughly whipped. Add the grape-juice to the yolk and pour this onto the whipped white, blending carefully. Serve cold. Have all ingredients chilled before using.

Grape-Juice and Egg.—Take 1 egg, 1-2 cup of rich milk, 1 tablespoonful of sugar, and 1-4 cup of grape-juice. Beat the yolk and white separately very light. To the yolk add the milk, sugar, and grape-juice, and pour into a glass. To the white, add a little powdered sugar and a taste of grape-juice. Serve on the yolk mixture. Chill all ingredients before using.

Grape Lemonade.—Make 1 cup of lemonade, rather sweet, add 1-4 cup of grape-juice.

Grape Lithia.—Pour 1 ounce of grape-juice into a glass, dissolve in it 2 teaspoonfuls of sugar, and add 4 ounces of lithia water.

Grape Nectar.—Boil together 1 pound of sugar and 1-2 pint of water until it spins a thread; remove from the fire and when cool add the juice of 6 lemons and 1 quart of grape-juice. Let stand over night. Serve with ice water, apollinaris or plain soda-water.

Grape-Whip.—Take 3-4 cup of grape-juice, white of 1 egg, 5 tablespoonfuls of sugar, and 1 cup of double cream. Beat the white of egg until foamy, add the grape-juice mixed with sugar, and lastly the cream; then beat with a whip-churn. Take off the froth as it rises and drain on a sieve. Pour the unwhipped mixture into a small, high glass and pile the whip on top. Serve cold.

Grape Gelatin.—Take 1 tablespoonful of granulated gelatin, 1-4 cup of cold water, 1 cup of boiling water, 1-2 cup of sugar, the juice of 1 lemon, and 1-2 cup of grape-juice. Soften the gelatin in the cold water, add the boiling water and dissolve; add the sugar, lemon-juice, and grape-juice, strain, pour into cold, wet molds and cool.

This preparation may be served in another, and very inviting, form: When the gelatin is firm, force it through a potato-ricer; then keep on ice until ready to serve.

Grape-Fluff. — Take 1 tablespoonful of granulated gelatin or 1-4 box of shredded gelatin, 1-4 cup of cold water, 3-4 cup of sugar, 1 cup of grape-juice, the juice of 1 lemon, and the white of 3 eggs. Soften the gelatin in the cold water and dissolve by standing the dish in hot water. Dissolve the sugar in the (mixed) fruit-juice and strain the gelatin into it. Set in ice and water and stir occasionally until the mixture begins to thicken, then add, gradually, the well-beaten white of the eggs and beat until the whole is light and stiff enough to hold its shape. Pile lightly in a glass serving-dish or mold, and serve with whipped cream or a soft custard.

Grape-Juice Ice-Cream.—Take 1 cup of cream, 1-2 cup of sugar, and 1-2 cup of grape-juice. Scald 1-2 cup of the cream and add the sugar; cool, add the remainder of the cream and the grape-juice, and freeze.

Grape Sherbet.—Take 3 cups of grape-juice, 1 quart of water, 3 cups of sugar, and the white of 2 eggs. Blend the grape-juice, water, and sugar, and partly freeze. Beat the white of the eggs lightly, add 2 tablespoonfuls of powdered sugar; add this to the sherbet and continue freezing until hard. Remove the dasher and allow the mixture to stand one hour, to ripen. (Pack carefully.)

Grape Ambrosia.—Take 1 quart of milk, 2 quarts of water, 3 1-2 cups of sugar, white of 4 eggs, 1 pint of grape-juice, 1 can of grated pineapple, and the juice of 3 lemons. Mix together the milk, water, sugar, and fruit-juices, and partly freeze. Add the well-beaten white of the eggs and continue freezing until hard.

Grape Frappé.—Take 1 pint of grape-juice, the juice of 1 lemon, 1 pint of water and 2 cups of sugar. Boil the water and sugar together for five minutes, cool, then add the grape- and lemon-juice. Freeze to the consistency of mush. Serve in tall glasses with sweetened whipped cream piled high on top.

Out here in the West we have what we call the "Wellington grape-juice cocktail.' It is simply a "highball"-glass filled with grape-juice, to which is added a dash or two of bitters, preferably Angostura or orange. This is a favorite "pick-me-up" among the transcontinental auto-tourists, but no less so with us who tour for business rather than for pleasure. It is likewise a good appetizer, without a "kick." Some prefer the juice diluted with seltzer, making a "grape-fizz" out of it. Either one acts as a good "bracer" after a hard day's drive. The "grape-highball," in which grape-juice takes the place of the usual alcoholic ("Scotch," "rye," or Bourbon"), is another popular drink among the tourists. It goes without saying that either of these should be iced.

Grape-juice should be the ideal food and drink in typhoid fever. It not only acts as a refrigerant, but in addition may be expected to inhibit the activity and virulence of the typhoid bacillus, because of the acid of the juice. It should be indicated not only in its plain form but in several of the combinations suggested by Pattee, if not in all of them. In fact, grape-juice, in one form or another, apparently is indicated in all conditions wherein a mildly acid food or beverage may be required.

GEORGE L. SERVOSS.
Gardnerville, Nev.

THE QUALITY OF THE DOCTOR'S DRUGS

[The letter which follows was submitted by its author, Dr. E. C. Duncan, of Fredonia, Kansas, to the editor of *The Journal of the American Medical Association*, but was rejected—quite properly, we presume—because it was not received until several months after the article of which it is a criticism had been published. Dr. Duncan then sent it to us, with the request that it be printed in CLINICAL MEDICINE. We are glad to use it, believing that the many readers of our journal who dispense their own remedies will be interested in the discussion, even at this late date.

While we agree in the main with Doctor Duncan, and disagree in some respects with Professor Puckner, we do want to say that we believe the latter gentleman has endeavored to be absolutely fair and judicial in his treatment of the subject. One mistake —if any mistake has been made—consisted in his failure to compare an equal number of the "regular" and the socalled "physicians' supply" houses. It is self-evident that the larger the number concerned in any inquiry

the greater the likelihood—indeed, the certainty—of variations from the average. For instance, a friend of ours, who has gone through Professor Puckner's report carefully, upon comparing his findings on the products of the first five physicians' supply houses mentioned with those of the five "regular" houses, finds that there is a very slight advantage on the side of the former!

We all of us admit the importance of determining the quality of drugs used in the treatment of the sick—whether by the prescribing or dispensing doctor. For this reason, the work done by Professor Puckner is most praiseworthy. Should it ever be resumed it should, however, be more sweeping in character. Instead of a few samples being investigated—which through accidental variations may mislead—many and repeated samples should be examined. Particularly is this necessary as regards official products, which thus far have hardly been touched by the Council at all. And not only should a few sources of supply be considered, but all sources, not forgetting the largest and most widespread of all, the retail druggist, who probably handles ninety-five percent of the drugs used by the people. In what condition, as regards purity, potency, accuracy of weight and measure, and reliability generally do his wares finally reach the consumer, through prescription or otherwise? This would be an interesting line of research.

As to the trade methods of the firms cited in Doctor Duncan's letter we have no criticisms to offer. Each firm must decide for itself the "line of least resistance" according to its own traditions, and with good business judgment. Nor would we offer a word of criticism of their products. Variations in strength—especially in galenic preparations—often seem unavoidable although no one can justify gross variations. All the houses mentioned we believe to be scrupulously honest.—THE EDITOR.]

To the Editor.—In the *Journal* of September 13, 1913, page 855, you print an article by Professor W. A. Puckner entitled "The Quality of Drugs Sold to Dispensing Physicians."

I have waited for nearly four months for someone more able than I to reply to that article. I wish to state, in the beginning, that I have the highest regard for Professor Puckner and believe him to be absolutely honest; however, I am constrained to say that his paper does not seem equally fair to both sides involved in it.

First of all, it is true beyond successful contradiction that it is unfair to pick fifteen houses that cater to physicians and only five that sell to the druggists. By reference to the list on page 856, you will note that a number of the houses that cater to physicians also sell to druggists with the same freedom they sell to physicians. Also some of the best physicians' supply houses are not included in this printed list.

Looking at the table on page 856, you will observe that two of the firms which the Professor lists as selling to druggists, sell morphine tablets that are below standard, while those of three are slightly above the standard. And, do not overlook the fact that four of these houses sell to the physician with the same keen enjoyment that they sell to druggists. *Only one* of these five firms sells to druggists only.

Now take table No. 2, page 857, analysis of potassium-iodide tablets, and you will observe that two of the five firms listed as catering to druggists sell tablets that are below standard, while those of three are slightly over standard; yet, as I stated before, four of these five houses sell to physicians as well as to druggists.

Passing to table 3, page 857, we find that of all the twenty firms doing business, the one firm of the five that will not sell to any but druggists, except the order be delivered through the local druggists, viz., Eli Lilly & Co., put out the lowest grade of hydrastis of any of the twenty firms, in fact, 82 percent—lower than any of the "cheap doctors' supply houses." Of the five firms, the average is 102.5, and of the fourteen (for only fourteen are included in this table), 105.99 percent. Hence, you will see that, so far as golden seal is concerned, the socalled "cheap" physicians' supply houses have an advantage, over your druggists' houses, of 3.49 percent in strength. And golden-seal is very expensive.

Now, when you take into consideration that all but one of the five regulars stand anxious and ready to sell to physicians direct, and that their agents call on the physicians with as much regularity as they call upon the druggist, all this talk that the dispensing physician handles cheap and unreliable goods seems the merest cant.

The druggist's whole interest lies in the filling of the prescription and getting the money, and then again filling said prescription and again getting the money. On the other hand, unless you assert and support the theory that all the everyday physicians (general practitioners) are utter fools, you

must concede that they have more direct interest in dispensing pure drugs of standard quality than have the druggists. And any such dispensing doctor, knowing that his reputation and earnings depend on results, certainly will buy the best drugs obtainable.

I have heard it claimed that the physician keeps his drugs until they lose their strength, but that is simply another catch-phrase, and I defy anyone to find more worthless drugs in a physician's office than on the druggist's shelves.

Most of the men whose writings are printed in our *Journal* (*A. M. A.*) haven't much idea of the ordinary physician who actually does the bulk of the medical work in this country. And, in defense of ourselves, I wish to say that the majority of us are not such idiots as might be supposed. In the past two years I have done little dispensing, and find prescription writing more satisfactory to me. But those who want to dispense know why they want to; and they—we—any of us have a right to buy from Parke-Davis, Mulford or anyone else with the single exception of Lilly; and we can buy from Lilly by having the drugs shipped through our local druggists.

I think I have proved to my own satisfaction that the morsel "the doctors buy cheap and nondependable drugs" which rolls so sweetly in the oral cavity of some of the druggists, is nothing but a most disreputable way of trying to force all doctors to write prescriptions. And I submit the following advertisement, which appeared in the Chanute (Kansas) *Daily Tribune*, issue of December 31, 1913.

THE RECORD

63,729 PRESCRIPTIONS FILLED

Twice as many refilled

Over 100,000 family prescriptions filled

NO ERRORS

Let us have yours.

THE LEGITIMATE DRUG CO.

Phone 81. Cor. Main and Lincoln.

The wail of the druggist certainly is explained. The wail is not for the benefit of the customer, but for himself. Each prescription filled three times!

If Professor Puckner had selected five of the very best houses that cater to the physicians, after having selected the five best in the United States for our druggists' friends, viz., Parke-Davis, Mulford, Sharpe & Dohme, Eli Lilly, Schiefflin, then the test would have a little more weight. Not much, however, because we physicians buy mostly of Parke-Davis, Mulford, and Sharpe & Dohme. The Abbott Alkaloidal Company, by all means, should have been included in the fifteen that cater to physicians, yet this firm, like many of the fifteen selected, sell to druggists too; and I can testify that, for "results," no manufacturing druggists or chemists in the world have anything on the Abbott people.

I wish to add that the Caphenin Chemical Company and the G. F. Harvey Company sell drugs worthy of the confidence of any physician, druggist, or patient.

E. C. DUNCAN.

Fredonia, Kans.

VENEREAL AND SEXUAL DISEASES

Having read in your January issue Dr. William J. Robinson's paper in which he recommends calcium sulphide in gonorrheal arthritis, I desire to ask whether he has tried Bier's stasis? It seems to give the most satisfactory results.

A. ROSE.

New York, N. Y.

GALLSTONES AND OBSTRUCTIVE JAUNDICE

I have read with pleasure Doctor Musgrove's article, in the December CLINIC, on icterus. In a practice of forty-eight years, I have had but three marked cases of obstructive jaundice—one being of the catarrhal variety, and comparatively short duration, although sufficiently protracted to leave the characteristic lemon-colored skin that lasted for two or three months.

One of these cases was caused by the obstruction of the gall-duct by a biliary calculus. This finally was passed per rectum, being octahedral in form and with sides of 5-16 of an inch. The patient was placed on an olive-oil treatment—literally prescribed an oil diet of half an ounce daily for two or three months; during which time several more calculi were passed (the number not being noted). Under this treatment, they seemed to have become softened, although retaining their octahedral form. The subsequent passage of the calculi in their softened condition was not accompanied by much pain, the patient eventually making a complete recovery. Morphine, 1-4 grain, was given hypodermically whenever required to alleviate what little pain occurred during their passage.

In another case, a man of 46 years had, in connection with icterus, valvular disease of the heart, with aortic obstruction. The case terminated fatally. A postmortem (which, by the way, the patient had requested to be made) disclosed enlargement, with dilatation of the walls of the heart, which weighed 28 ounces. I found the gall-bladder packed with 17 calculi, all of them being octahedral in form, the largest one with faces 7-16 of an inch and the others ranging from that down to 2-16 of an inch.

GEORGE D. STANTON.

Stonington, Conn.

[Of course many cases of gallstone-disease demand surgical intervention—but not all. It is surprising how many of these patients—patients who have suffered the unspeakable agony of hepatic colic—get well under the prolonged use of sodium succinate, with such adjuvants as the bile salts, boldine, the salicylates, saline cathartics, and olive oil. Unless symptoms are urgent do not hurry these people off to the city surgeon. Try these remedies.—ED.]

A BICHLORIDE TABLET—AND APOMORPHINE

I received by today's mail *Helpful Hints*, in which I notice a piece from Dr. R. D. Epting, from *The Charlotte Medical Journal*, Feb., 1913, p. 80, about some uses for apomorphine. I wish to tell of an emergency in that direction.

About the middle of November last I was on a train for Spencer, near Salisbury, North Carolina, when a conductor came into the coach where I was and excitedly asked whether there was a doctor in this coach. A friend sitting with me pointed me out, whereupon the conductor said that a man in another coach had swallowed a bichloride of mercury tablet and needed help. I went in and found the man in great pain and distress. Happening to have some 1-10-grain tablets of apomorphine in my hypodermic case, I quickly dissolved two in a little water and injected the drug into his arm. It was but a few minutes before abundant vomiting took place, much to the man's relief. I then requested the conductor to wire my friend Doctor Stokes at the next station to have an ambulance meet the train at Salisbury and rush the man to the hospital.

About mid-evening I went to the hospital, when Doctor Stokes told me that he had used the stomach-pump and washed out the man's stomach. "But," he added, "you did the very thing necessary and doubtless saved the man's life." If I had had any sodium sulphate, calcium sulphide or sodium hyposulphite, I should have given one of these in the hope that the chemical reaction in the stomach would form an insoluble precipitate of mercury.

L. H. HILL.

Germantown, N. C.

EMETINE HYDROCHLORIDE USED IN INFANTILE HEMORRHAGE

Recently I had an opportunity to try emetine hydrochloride in a case of hemorrhagic disease of a new-born babe, the father giving a history of having suffered from syphilis.

The second day after birth there was hemorrhage from the child's eyes, nose and rectum, drops of blood oozed from the scrotum and penis, and the baby also vomited blood. Upon the third day after its birth I injected one-fourth of an ampule (1-8 grain) of emetine hydrochloride and the hemorrhage stopped for two hours; then it began again slowly, and gradually increased in quantity. On the morning of the fourth day I gave another injection of the emetine and the hemorrhage ceased entirely. Since then the baby has been doing splendidly.

J. B. ROSS.

Chicago, Ill.

[This is the first case we have seen reported in this country of the use of emetine hydrochloride hypodermatically in the treatment of hemorrhage. Our brethren in France are now using the remedy extensively for that purpose and the results are sometimes simply marvelous. For more details we refer you to the little article in our "What Others Are Doing" department, page 247 of this issue.

French physicians now regard emetine hydrochloride, hypodermatically employed, as the best remedy available for the immediate control of hemoptysis (hemorrhage from the lungs) and they are also using it with splendid success for the arrest of hemorrhage of all kinds. How it acts nobody seems to know, but that it is effective there can no longer be any question.

We sincerely hope that the many readers of CLINICAL MEDICINE who have cases of hemorrhage to treat—and who have not—will provide themselves with supplies of this remedy for emergency use. Try it in a num-

An Ideal Home and Office for the City Physician

ber of cases and report results. In hemorrhage from the lungs it undoubtedly should be used in every instance.—ED.

AN ATTRACTIVE HOME FOR A CITY PHYSICIAN

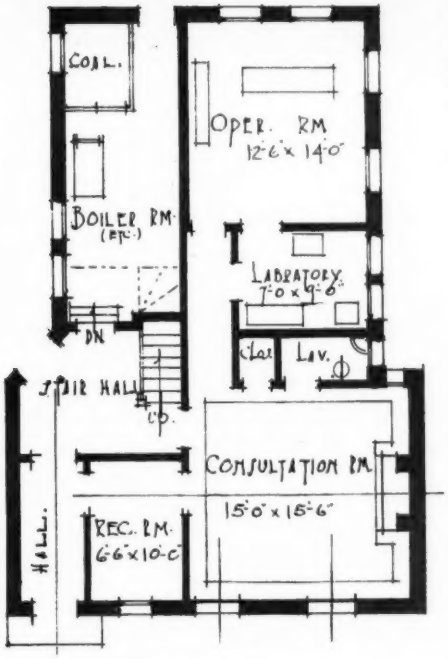
Last month Mr. Busch gave us a plan of a home for a country doctor or suburban physician. This month he provides a plan for the city man. This is designed for someone living in the crowded portion of the town, where land is valuable and the lot space restricted, with a frontage of about thirty feet.

This house can be built of any desired fireproof material such, for instance, as cement, fireproof tile or brick, the latter being suggested. A tile roof will add greatly to its attractiveness.

The first floor, as will be observed, is built level with the ground, according to the English plan. This makes the house peculiarly convenient for patients wishing to consult the physician. The consultation-room, office, and laboratory are all on the first floor. The living-rooms are on the two floors above. The operating-room is placed at the back, so as to provide an abundance of light. It is suggested that the partition between the operating-room and the laboratory be of glass, in order to increase the amount of light admitted to the latter room.

The large living-room on the second floor and the dining-porch will be peculiarly attractive to the housewife. It is suggested that a door may be opened between the kitchen and the dining-porch, which can also be enclosed in glass and used as a conservatory or sun-parlor during the winter months.

On the third floor there are four large bedrooms. If it is desired, in order to increase the light and improve the ventilation,



Ground Floor, Showing Office

attractive skylights may be placed over the two bedrooms in the front.

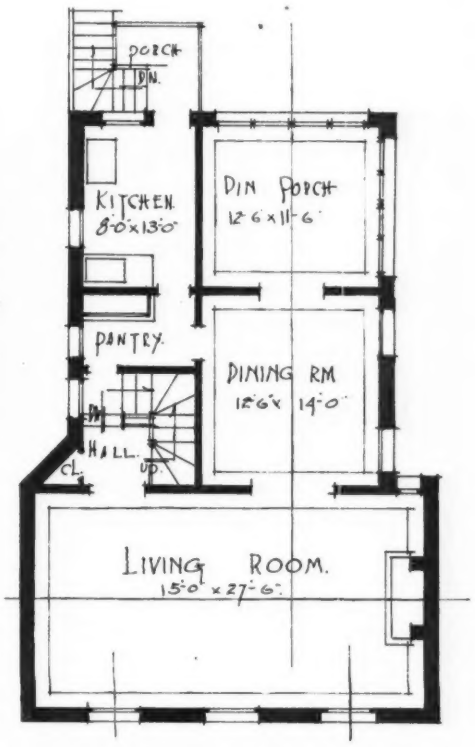
These plans were drawn by Mr. Arthur H. Busch, 1306 Gregory Avenue, Wilmette, Illinois, who will be glad to answer any inquiries concerning this house or any other in which any doctor may be interested. Mr. Busch is giving special attention to the planning of physicians' homes and offices and will be glad to hear from any interested physician. Next month he will present a plan of a detached physician's office.

THE PAIGE-DETROIT CAR—AN ANSWER

I notice in the February issue of this journal that a subscriber is desirous of learning from some reader of CLINICAL MEDICINE his experience with the Paige-Detroit automobile.

I purchased a Paige 36 horsepower roadster on July 29, 1913, and August 3 started with it on my vacation, going from Evanston to Minneapolis and thence to Duluth, returning home September 3. During this trip I experienced some good roads and some very bad roads, finding stones, ruts, deep sand, and many long, steep hills. Owing to the extremely hot weather and the condition of the roads, as above mentioned, naturally enough I expected trouble with my new motor at any time, but was agreeably surprised to experience perfect satisfaction, with absolutely no expense for repairs.

I have now driven my car 4200 miles, and on good roads I average fifteen miles per gal-



Second Floor, Showing Living Rooms

lon of gasoline. I can consistently say that the Paige "35" has sufficient power and speed to satisfy the majority of automobile enthusiasts. The car is finely upholstered and assembled, all of which adds materially to the easy-riding qualities of any make of car.

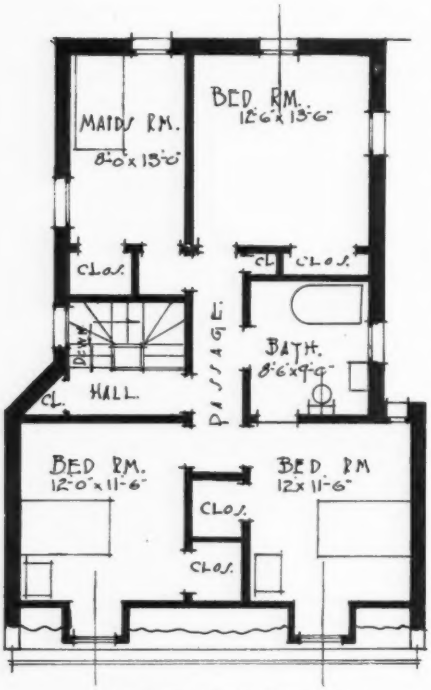
After having made a thorough investigation of the different makes of cars, I can say without hesitation that the Paige-Detroit automobile is the best value for the price on the market.

During the severe cold weather of the past two weeks I have been using my car every day, and it has not caused me the slightest trouble. I can say to anyone contemplating purchasing an automobile that there is one other advantage that I consider of great im-

portance, and that is the courteous treatment and prompt and efficient service given by the state representative of the Paige-Detroit automobile, the Bird-Sykes Co., of Chicago.

A. G. PORTER.

Evanston, Ill.



Third Floor, Showing Chambers

A HIGH-FREQUENCY PROBLEM

I wish to ask about the use of the portable high-frequency outfit. I have a number of good works on electrotherapy (those of Dugan, Rice, Eberhart, Neiswanger, and others), but from the tenor of their discussions it seems as though they get this current exclusively from large machines or from the static machine.

What some of us "small fry" want to know is, What will one of these portable outfits do? What can we, properly, treat, and what ought we treat? Any information will be greatly appreciated.

R. L. HATHWAY.

East Liverpool, Ohio.

[Not being an authority on this subject, we referred Doctor Hathway's letter to Dr. Noble M. Eberhart, of this city—who is. Following is his answer:

"Practically all of my treatment work has been done with large high-frequency apparatus. I have never taken a patient whom I treated throughout with any of the portable machines, so that I cannot say absolutely whether the latter will do the same work as the larger ones, or not.

"It seems to me, however, that any of the standard portable machines should be capable of doing all that can be accomplished with a vacuum-tube in the treatment of skin diseases and various surface lesions, and probably all office cases. There is a possibility that in some of the latter, for instance in the treatment of the prostate gland, it may take a longer time to accomplish the same result.

"In the advertising matter of one of the dealers in small machines, I see the claim made, or rather directions given, for treating arteriosclerosis, diabetes, and other constitutional conditions that can be treated only by autocondensation. As a matter of fact, no portable machine that I have seen is capable of giving sufficient dosage to accomplish results. The directions referred to consisted in surface and spinal applications of high-frequency sparks from the vacuum-tube, for arteriosclerosis; but this treatment, to my mind, is positively injurious and would tend to raise rather than diminish the blood pressure.

"Claims like these only tend to discourage the use of high-frequency currents. The scope of the portable coil seems to lie in the treatment of those diseases only in which the trouble is on or near the surface of the body and localized in character. This makes them very valuable, and especially do I see a field for their use in the hands of the general practitioner, who can employ them in his house visits, to reinforce his medical treatment in many diseases that heretofore we have not looked upon as coming within the scope of this form of current.

"It is surely no reflection upon the portable coil to say that it should not be expected to take the place of the large machines. If this were the case, only portable machines would be manufactured, of course.

"To recapitulate: The portable machine can be used for treating skin diseases, neuralgias, neuritis, catarrhal conditions of the nose, throat, eye and ear, and suitable diseases of the orifices of the body; but no one should attempt to treat (and expect results in) arteriosclerosis, diabetes, chronic rheuma-

tism, anemia, gout, pulmonary tuberculosis, and other constitutional diseases."

This seems to cover the matter fully.—Ed.]

HE FINDS IT GOOD

The February number of Clinical Medicine is at hand. I have marked fifteen articles that I think are especially good and to which I expect to refer in the future.

This particular issue impressed me as being the best single number of any medical journal published in the interest of physicians and in which any reputable doctor is given the opportunity to express himself. It is higher in price than some of the other medical journals, but it is one of the best published.

In this connection I wish to express the hope that a number of subscribers will contribute short articles on medical superstitions, for an early number of Clinical Medicine. Ignorance and superstition on the part of would-be doctors interferes materially with the success of reputable practitioners.

O. C. Church.

Greenville, Ill.

MEASLES: A SEVERE EPIDEMIC

During the past thirty days I have seen hundreds of cases of measles. During forty-five years of practice I have never seen the manifestations of the disease as severe as they have been in this epidemic; still, complications have been extremely rare and there has not been a single death so far. There have been, though, certain anomalies.

For example, in a considerable number of cases, on the third and fourth day of the eruption, there was persistent vomiting and a greenish fluid was discharged from the bowels. These patients during convalescence have a ravenous appetite. Then there is a certain number of cases—and these confined entirely to adults, and more especially those who have had the disease in childhood—in which the eruption is sparse, confined entirely to the face and in the hair of the head, and these patients sweat enormously and persistently, fairly are "drowned in sweat." Agaricin, digitalis, aromatic sulphuric acid, and other standbys have no effect. These sweats disappear with the eruption. Will some kind brother stand up and explain?

J. H. Watson.

Woodlawn, Ill.

[In the more severe cases, vomiting and purging are not infrequently observed. Intestinal catarrh (with more or less hepatic congestion) causes a troublesome diarrhea and in young or debilitated patients may lead to enterocolitis. A few divided doses of calomel and podophyllin followed by laxative salines and the sulphocarbolates will usually control the condition. It may be well also to administer atropine (gr. 1-500 at two to three hour intervals) to relieve any localized congestion. Three or four doses usually suffice.

Profuse sweating is decidedly uncommon, although in measles we have to deal with "an acute hyperemia with a tendency to cellular infiltration around the blood vessels—particularly those which surround the sebaceous and sudoriparous follicles." It is quite possible that there may be a mixed infection in the patients presenting this peculiar symptom. The clinical data presented are, of course, insufficient to permit the expression of a positive opinion, but these cases certainly are not typical of measles, and it is possible they may be something else. In the first place, the scalp is but slightly involved. It would be interesting to know whether Koplik's spots were observed, and the character and course of the eruption.

It is probable that thorough elimination, the administration of atropine and quinine arsenate and the free local use of epsom-salt solution would control the diaphoresis.

The report is of exceeding interest. We hope that others who have seen similar cases will give their experience.—Ed.]

ANGINA PECTORIS: EFFECTIVE TREATMENT

On November 11, 1911, I was called to see a Mr. Leg, who had suddenly been seized with violent pain over the precordial region radiating over the front of the chest and down the left arm, with a sense of impending death, but, owing to a previous call to see a Mr. L., who had a stroke of cerebral apoplexy and died five hours later, I failed to go then. The next morning I was asked by the physician, who had been called in my stead, to see this man with him in consultation, and this I did. When I saw the patient I was impressed with the typical character of the case.

The paroxysms came on about every twenty to thirty minutes. The attending physician said he had been unable to control them by giving him hypodermics of morphine and atropine. He had repeated these drugs several times, but without results. After watching the patient for some time, noting the arterial tension and that the vessels assumed

the rigid character observed in such patients, observing also the absence of fever; and further ascertaining that there was constipation and that Mr. Leg was a hearty eater, often neglecting to keep his bowels open, and that his urine often appeared very red and was irritating, I suggested the stoppage of the hypodermics of morphine and atropine and to give in place the defervescent compound of aconitine, veratrine, and digitalin.

The doctor readily consented, and just as soon as the patient began to get under the effects of this agent the attacks grew lighter and farther apart, and very soon ceased entirely. The remedy was kept up for some time. Also, I kept the bowels and kidneys flushed, and suggested that the urine be tested. The result of this examination I did not learn, but have seen and questioned the patient several times since and he always states that he has had no further trouble since we put him on "those little pills."

On October 12, 1912, I was called to see a Mrs. C., who said she could not sleep, not having slept any since about four or six weeks before, because of a gripping pain over her heart and which "spread out over her chest and down the left arm." She had been treated by another doctor, who told her that she had indigestion. But she knew that there was something wrong with her heart. She could not sleep, or, rather, lie down, except she had a very high pillow, since she could not get her breath otherwise. Examination revealed a presystolic murmur, but so faint that it could not be heard without the most careful auscultation. I also examined the urine, but found nothing radically wrong.

I placed her on the same remedies as the preceding patient—the defervescent compound. I happened to see her on the third or fourth day after beginning treatment, when she reported that she was doing finely and that she could now sleep without any trouble, the first time for several weeks. I told her to continue to take the treatment and also to continue to take a saline laxative as directed. She did so and I have not heard from her for several weeks; but up to the present there have been no return of attacks, I am sure.

I was also called to see a Mrs. C., May 8, 1913. I found practically the same train of symptoms. She, too, had been under the care of a splendid physician. I put her also on this treatment, with the result that she has, for some time, been able to walk any distance she has undertaken, and that without difficulty. She had had these paroxysms for two or three years. Her son lives in our town and he reports to me often that his mother appears to be well.

A friend, Dr. J., called upon me very early on the morning of July 15, 1913, stating that his wife was awakened with palpitation, with great pain over the precordial region, and that this pain radiated over the front of the chest and down the left arm, and that she was terribly distressed therefrom and contended that "her heart was in a vise," and she was sure to die. The doctor gave hypodermics of morphine and atropine, and he told me that he had tried everything in the way of antispasmodics.

I suggested that we get the bowels opened well. This, he said, he had done; but, after some coaxing, I got the woman to take laxative saline draughts freely, and these acted splendidly. However, this did not relieve her, whereupon I suggested giving the defervescent compound. Later, the Doctor informed me that the very first pill given had relieved her and the heart quieted down at once. He kept up the remedy, and she has had no more trouble of that nature since.

It is conceded by the profession that this condition is due to degeneration of the walls of the coronary arteries and of the large vessels adjacent to the heart, also of the heart-muscle. From my understanding, there is a spasm of the heart-muscle, with a pulse of very high tension. The action of the veratrine and the aconitine is, to relax this spasmodic state, and that of the digitalin is, to regulate the rhythm of the heart; this bringing about a condition whereby the heart is better nourished and promoting the diastolic quality of the heart's cycle.

Pardon me for venturing into print, but I am extremely anxious that this capital remedy be tried and reported on.

A. C. WATERS.

Athens, Ala.

THE QUESTION OF FEES

The question of fees or of the doctor's bill, as the case may be, is a very important subject, for it concerns both the doctor and the patient. It is what the doctor is practicing for and what the patient gives for treatment.

Fees vary in different localities just as almost all other things do. They should not be too high nor too low; if they are either, one of the parties is injured. I have often heard common laborers make the remark that Dr. A. charged Mr. B. a certain amount for making a two-mile visit, and then say that

they would be mighty willing to go back and forth all day long for that price. Such people surely do not know that the up to date doctor cannot afford to be feed on the basis of an ordinary unskilled laborer. It should be remembered that the up to date doctor has spent four years of his time at hard study in a medical college and expended many hundreds of dollars while doing so. Besides, he passed the state-board examination, paid out money for equipment, and spent valuable time in building up a reputation. And, also, his living-expenses are much higher than those of a laborer, skilled or unskilled. It is essential that a doctor should charge a liberal fee; cheap doctors, as a rule, are like other cheap things—not worth very much.

At the present time I devote special attention to general chronic diseases, or, in other words, I like to treat chronic conditions. With regard to fees in chronic diseases, I will say that I believe a patient should be treated by the week or month and for a specified amount payable each week or month. When this is done, the patients can quit when they please, and they have no grounds for complaint, as they can be the judge of the results and continue treatment as long as they wish. Modest fees paid cash will enable a physician to do practice cheaper than when a credit practice is done. I do not make any charges to a few of the deserving poor, especially widows and orphans.

J. A. BURNETT.

Hartshorne, Okla.

DREAMERS

"The world," says our old friend Lee, "is made up of two main classes: millionaires and would-be millionaires—the rest are dreamers, vagabonds, thieves, and the like." This is what our friend Lee says, and many there are who would agree with him. But I rebel! Dreamers, vagabonds, and thieves! Why dreamers and vagabonds in the same category? Why? Why should they put me —there, it has slipped out! I am a dreamer.

I wrote to our distinguished editor one day —wrote that I was a dreamer and should like to write for his journal. And, what do you think? Our courteous editor lifted up his hands in quasi-horror and whispered: "No, no, not too much of the dream stuff. Our readers don't like dreamers' articles. What they want is practical stuff."

No dreamers! Well! Of course, I gave up my plans for my series of articles—but I began to think. Our editor is a man of learning and of strong personality withal. What he says cannot be lightly passed over. Was he right? He evidently classed dreamers in the same category that our friend Lee classed them. Strange! But is it as true as it is strange? I thought a great deal about it, and I began to come to the conclusion that there was something wrong, something radically wrong.

Doctors are practical men, or ought to be. That's true. But there must be a vein of dream—a dream motif—in them, in order that they may achieve results, great results. Else they will always be small practitioners; else they will never get out of the rut.

Oh, yes! a doctor must dream. The more, the better. His whole professional life must be filled in with dreams. Otherwise he'll degenerate into a Doctor Nobody.

He begins with dreaming of a larger, better-equipped office, and he works hard for it and pulls himself up gradually and finally gets it. Then he dreams of better, loving service to mankind, the saving of life and the sparing of suffering in which he is ever the hero. He grows with his dream—expands, studies, keeps abreast with the times, expends every iota of energy and makes every sacrifice, that his dream may come true. Then, one day, he wakes from his dream and finds himself renowned in his locality. He wakes and dreams anew—broadening, striving with might and main—and one day, like our poet Byron, he awakes to find himself famous.

Look into the past of medicine. Whose names do you see? The names of those who dreamed and their dreams came true, who revolutionized medicine and acquired undying fame. What was anatomy when its disciples dissected underground for fear of being tortured? Why, only a dream. And when the dream came true, look at the fields it opened. What was anesthesia, if it wasn't a dream? And when Morton's dream came true, just see what it meant to him and to the hordes of humanity!

Look around you today. What men stand out in the front ranks of the profession? Why, those who have seen a vision and are straining to clutch it and bring it into being—those who dream and work, and make their dreams come true.

Look into the future. What vision do you see? What dream do you dream? Answer carefully, for on your answer depends your future. Dream well, friend, and God grant your dreams come true.

And those others, those who do not dream? Those who plod their beaten way, those who

tread the path that every one knows? Why, they are the millionaires, perhaps; or, more probably, the would-be millionaires who never, never are gladdened by a dream.

So, when I reflect upon these things, I gain courage, and think that perhaps it was well that I was born a dreamer. And perhaps 'tis well that I dream. True, there are many that would gainsay me, but a dreamer never minds such things. *He* does not care. He just dreams, and is glad that he dreams. Of course, disappointments and despair do come at times, and heartaches and sorrows *are known* to him—ah, yes—but anon comes a dream—and he forgets, forgets the misery of the world in his dream.

D. E. Piconi.

Brooklyn, N. Y.

CORRECTION OF AN ERROR IN DR. LYDSTON'S ARTICLE

In the first installment of my article on "Syphilis" in the January number of Clinical Medicine I am made to state that I administered to one of the cases reported, 20 minims of a 20-percent solution of bichloride of mercury intravenously. This should read 20 minims of a 2-percent solution. The error should be charged to faulty proof reading, and I cheerfully accept my share of the responsibility. Some physician whose letter I have mislaid, and whose name I have forgotten, called my attention to the error. I take this means of thanking him. As I had made mention in the rest of the text of solutions no stronger than 2 percent, I trust that the error was so obvious that no harm was done.

G. Frank Lydston.

Chicago, Ill.

TONSILLITIS: AN OBSTINATE CASE

The editor of Clinical Medicine has asked for reports on experiences with tonsillitis. As for myself, I certainly have had my share of trouble in this line this winter and have encountered some of the toughest cases I ever came across. A few cases were mild and came to an end in four to six days; others were about the average, lasting from ten days to two weeks; two terminated by forming abscesses, and I lanced. One of the cases, while it is typical of many others, except for its continued severity for such a long time, I want to report.

The patient, the son of a farmer, was 9 1-2 years of age, rather under size for his years, and was the second child in a family of five. He was considered tough and wiry by his associates, has had all the diseases of childhood, except scarlet-fever and diphtheria, and had an attack of tonsillitis about one year previous to the present one. His mother says his tonsils have always been large. His former attack kept him out of school for about two weeks.

The present attack began as follows: The boy came home from school in the evening complaining of headache and did not want any supper, going to sleep on the lounge before bed-time. His mother woke him up to put him to bed and found him very hot, but before she was able to get him to bed he was taken with a hard chill. When put to bed he was given, besides hot drinks, antikamnia and quinine, 2 1-2 grains of each (this happening to be in the house), repeated every hour until three doses were given. The chill subsided in time and he had a good sweat.

Next morning he seemed quite well again, except that his throat was sore; but he wanted to dress and go to school. His mother give him a little breakfast and followed this with a cup of a popular laxative tea, to move his bowels, and ordered him to stay in bed. She also had him gargle his throat with sage-tea, honey, and alum, several times during the day. He complained of his throat but very little and contended that he might have gone to school. The mother said that during the afternoon she saw that his temperature was going up, and at about 8 o'clock in the evening another hard chill occurred.

Thereupon I was called and saw the patient at 9:30 o'clock. He was over his chill and the following conditions were found: Temperature, 104° F.; pulse, 120; bowels had not moved, and no one seemed to know when they had moved last time, the patient being delirious; tongue was heavily coated and the breath very offensive. Both tonsils were badly swollen and dark in color, the swelling and discoloration extending up the faucial arches, involving the soft palate and roof of mouth; the throat also was swollen externally over the region of the tonsils.

The treatment instituted was as follows: Calomel, 1-4 grain, with soda and aromatics, every half hour until 2 grains were given. Two hours after the last dose a saline laxative was given, and repeated every three hours until the bowels were thoroughly cleared. One granule of aconitine hydrobromide was alternated with the calomel combination until the skin became active and the arterial tension

was reduced; then the intervals were lengthened to two or three hours, according to the condition. A large poultice of antiphlogistine was applied externally. A gargle of listogen was left, this to be used freely.

I saw the patient on the following (the third) day at 2 in the afternoon. The bowels had moved thoroughly; the temperature stood at 103° F., and the pulse ran 110; the tongue was heavily coated, the skin was dry; the throat was still more swollen, the tonsils almost met and still were dark-red in color; the soft palate looked like a sack filled with fluid. In fact, it seemed as if all the tissues in that region were involved; he could open his mouth only with difficulty; could not turn his head but had to turn his body; swallowing was extremely painful.

I ordered calcidin (which the patient had already been taking) continued and in place of the aconitine gave the dosimetric trinity, hoping to hold the high temperature within proper bounds. The region over the tonsils was painted with tincture of iodine. The same gargle was continued.

On the following day the boy's condition was about the same. The temperature was 103.2° F., and pulse 120; the throat was still more infiltrated and the tonsils had large whitish patches of coating on them. The bowels were again cleared out with saline laxative, and this was followed by an intestinal antiseptic; the dosimetric trinity was continued, as was the calcidin; the patches of coating were removed by means of cotton wound on an applicator and dipped into the listogen. I also left a gargle consisting of a 1 : 100 solution of permanganate of potassium.

This treatment produced but slight results in the general condition. On the eighth day of treatment, the patient's temperature was 102° F., and pulse 110; the throat still was bad and the coating continued to form when removed. The patient showed the strain of the disease, for he could take but little nourishment.

On the eve of the tenth day he had another chill and then his temperature went up to 104° F. and the pulse to 128. Both tonsils now were aspirated, in the hope of finding a pocket of pus, but no pus came. I now discontinued the intestinal antiseptic, as the stools were odorless, but began giving nuclein in full doses. To make a long story short, I came very near losing my patient, because we could not get him to take sufficient nourishment; what little he did take was in the form of beef-extract and liquid peptonoids.

On the eighteenth day, his condition was as follows: Temperature, 101° F.; pulse, 110; tongue, heavily furred; throat and tonsils still swollen and deeply infiltrated. The bowels were now kept open with the calomel, podophyllin, and bilein compound, given once a week, followed by the alkaline laxative morning and evening. The patient made no permanent improvement until after thirty days, the temperature remaining normal or below from this time on.

This boy lost six weeks from school by reason of this tonsillitis. Why was this? Was my treatment wrong? And how could it have been improved? Would this boy have been benefited by bacterins? If so, what kind? This is the hardest fight I have ever put up against a case of tonsillitis and seemingly the results were the poorest of any. I will add that the treatment adopted in this case has never before failed me in treating this disease.

I should like to have not only the editor of CLINICAL MEDICINE comment upon this case, but the readers also.

C. W. CANAN.

Orkney Springs, Va.

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[The treatment followed by Doctor Canan was good so far as it went, but evidently the infection was a severe one and the use of an appropriate bacterin would have saved much suffering and probably have enabled the patient to return to school at the end of the second week.

When dealing with angina tonsillaris (which is most frequently observed during the period between the ages of ten and thirty), it must always be remembered that the condition of the tonsils may be a potent predisposing factor, the bacteria propagating readily in glands which are enlarged or the seat of calcareous deposits. Then, also, what is called rheumatism has been regarded as one of the most constant predisposing factors. On the other hand, however, tonsillitis has been deemed by some the initial manifestation of a subsequent rheumatism.

It has always been pointed out in our columns that socalled rheumatism, tonsillitis, and other acute inflammatory conditions occur in autotoxemic individuals. Prevent or control autotoxemia, in other words, maintain a normal condition of the body-chemistry, and the acute condition will not occur, or will appear in a modified and easily treated form. In the majority of cases the exciting cause doubtless is of a microbic nature.

Angina sometimes is infectious, and not infrequently epidemic. It, therefore, always is desirable to send a swabbing from the throat (especially where false membrane is present) to a reliable pathologist. The diplococcus pneumoniæ and bacillus Friedlaender are responsible for many cases of acute tonsillitis; streptococci, staphylococci, micrococcus catarrhalis, and bacillus influenzæ are also frequently found in the secretions of the mouth and pharynx. The writer has found the bacillus Friedlaender to predominate in membranous angina.

It must be remembered that, while in some cases the surface of the tonsil is dotted over with irregular islets of inspissated debris, occluding the orifices of the crypts, this material in others extends over the intervening surface of the tonsil in the form of a false membrane and occasionally is observed on the soft palate and uvula. This substance is white, grayish or of a dirty-yellow color, is readily separated, and does not leave a bleeding surface beneath. Both tonsils are generally found to present similar changes.

Our correspondent's patient seems to have presented a typical picture. In the more severe forms of tonsillitis, the glands may be in contact in the middle line and the great swelling of the tonsils distend the anterior faucial pillar, pushing up the soft palate and encroaching on the uvula, which may resemble an Indian club.

Suppuration of the tonsil itself is of rare occurrence. In the milder forms, the disease-process may last only three or four days, but occasionally increases until the fifth or sixth, the local symptoms beginning to decline on the seventh. In the more severe forms, however, an angina may persist for two or even three weeks, and then leave the patient (as in this instance) in an extremely debilitated condition.

The treatment must always be based upon the recognition of a systemic infection. We should have pushed nuclein, echinacea, and calcium sulphide in very large doses, in alternation with sodium salicylate and calcidin.

In some cases, sodium benzoate seems to give better results than does either sodium salicylate or salicylic acid. Thorough elimination must, of course, be secured at the start, and maintained throughout the course. The urine should be carefully examined from time to time, and albuminuria guarded against. When there is much secretion, an alkaline lotion should be used locally, and the parts then swabbed with a strong solution of salicylic acid, potassium permanganate or dilute tincture of iodine. The writer is inclined to favor a 1-percent phenol solution in glycerin.

Externally, colloidal silver, ichthyol or methyl salicylate and guaiacol may be applied. Compresses wrung out of a strong solution of epsom salt reduce congestion. Properly prepared buttermilk, fruit-juices, clam-bouillon, and egg-nog are the most serviceable nutrients. The anemic condition so frequently following prolonged tonsillitis yields readily to a course of the arsenates of iron, quinine and strychnine, with nuclein, and some good defebrinated preparation of blood.—ED.]

A CONVINCING DEMONSTRATION OF TYPHOID BACTERINS

Called to the bed of a sick man, I found a person about 40 years of age, of plethoric temperament, tall and robust, and weighing about 190 pounds. He was severely sick, complaining of occipital headache, disordered stomach, muscular weakness, and depression, and I found he had a moderately distended abdomen. His high temperature—105 degrees—followed on the heels of a chill lasting between a half and one hour, and he had ever since been restless and sleepless. I made a provisional diagnosis of typhoid fever, and prescribed epsom salt, the three sulphocarbolates, aconitine, hydrochloric acid, echinacea, and other things, according to the usual indications for typhoid fever at that early stage. This was September 5.

The patient was again seen on September 7, when his temperature still stood at 105 degrees, with the symptoms enumerated in more aggravated form. I then administered a bacterin containing 300,000,000 dead typhoid bacilli, discontinuing the aconitine and making a little change in the internal treatment. On the morning of the 8th, his temperature had dropped to 101° F., with an alleviation of all the symptoms. His temperature on the 8th and 9th did not reach quite 102° F. The neighbors and family began to doubt my diagnosis, especially on account of the sudden onset of the disease. At 9 a. m., September 10, his temperature was down to 99.5° F., and I was afraid to administer a second dose of typhoid bacterin, not having had enough experience with it, and left, satisfied with ordering internal medication.

On September 11, at 4 p. m., I was again at the patient's bedside, and the temperature

now stood at 105.5° F., there was the same severe occipital headache, depression, restlessness and other symptoms as at the start. I administered 400,000,000 dead typhoid bacilli, and, for fear there might be additional infection, I gave, in addition, streptococcus pyogenes, 30,000,000; pneumococcus, 40,000,000; colon bacillus, 40,000,000. On the morning of the 12th, the patient's temperature fell till it reached 97 degrees, and he dropped off into a deep sleep and sweated most profusely. This practically ended the patient's illness and I made no more visits.

On October 2, the man came into my office for a "little medicine for constipation." He told me that since the crisis he had been practically well, only feeling weak, and that his temperature had been normal, except that once in a while it would go up to 100 and once to 101 degrees.

At present I have under the bacterin treatment four other cases of typhoid fever. One of these patients is going through a relapse after having been treated for three weeks by the old method. He was up for ten days, so he said, and went to town, when he returned home sick with fever. I saw him on the 23d of September. His temperature was 103 degrees. He had been having fever for three or four days. One dose of 300,000,000 dead germs (typhoid) bacterin was given. This was repeated on the 26th (400,000,000) and on the 29th (500,000,000). He began to improve from the first dose, the temperature becoming normal on the 30th.

The second patient is a close neighbor to this last patient, and I was called to see him when attending the latter in his relapse. This fellow had a temperature of 102° F. and complained of the usual premonitory symptoms of typhoid fever. He was given a dose of 300,000,000 typhoid-bacilli on September 24, with resulting subsidence of all the symptoms. He was again seen at my office October 5, showing a temperature of 100 degrees and complaining of headache. He was given a laxative and ordered to continue upon a light and easily digested diet. When seen a few days later, he was free from fever and other symptoms, except for some weakness.

The third patient was a pregnant woman in her seventh month. She had been having slight fever for four or five days previous to September 25, when I first saw her. She was now threatened with a miscarriage or premature delivery, having taken 8 grains of calomel the day before. She was having uterine contractions at half-hour intervals and the os was slightly dilated. The head was low in the pelvis. Hayden's viburnum compound, and morphine (hypodermically) 1-4 grain were given; also acetozone in solution. The foot of the bed was elevated and a rectal enema administered.

The patient residing 10 miles distant, she was not again seen until September 30. The symptoms of threatened miscarriage apparently had ceased, but her temperature remained at around 100 to 101° F., being somewhat lower in the morning. Having now confirmed my former provisional diagnosis of typhoid fever, I administered 300,000,000 typhoid bacilli and continued the acetozone. On the evening of October 1, she perspired profusely, after which her temperature came down to below normal.

On October 4, I was again summoned to see this woman, when I found that the bag of water had been ruptured and the amniotic liquor had escaped to a considerable extent, although she had been taking occasional doses of Hayden's viburnum compound. I waited till the following day, but the patient's strength was so reduced that by then it was apparent she could not deliver herself. So, I applied the forceps—the first time in my practice that I had to resort to that instrument. The recovery was uneventful. The baby died ten hours after delivery.

The fourth patient was seen September 27. He is a man about 35 years of age. Temperature about 104° F.; tongue dry and contracted and of beef-red color, showing severe infection. This patient had been having diarrhea for about ten or twelve days and had been passing some blood in his watery stools; also was delirious. Typhoid bacterin 300,000,000 organisms, was given on the 27th, 400,000,000 on the 30th, 500,000,000 on the 3d of October, and 600,000,000 on the 6th; after which the temperature came down to 94° F. and the general symptoms subsided. The patient was very weak and reduced in strength from the first day I saw him and is now convalescing rather slowly, as may be expected.

I have three other typhoid-fever patients in bed at this writing, all receiving the vaccines and all doing nicely. Typhoid bacterin is all that will be used, practically, in the near future, in treating this disease. Also, I am of the opinion that all cases seen early may be aborted, provided the dose is large enough. With fairness to Homeopathy, it ought to be stated that the use of these bacterins is in keeping with the homeopathic law of cure, "Similia similibus curantur."

although a majority of the disciples of Hahnemann do not see it that way, just because these vaccines had not been "proved" on the living.

Finally, in aborting typhoid fever, we must never fail to make our charges in accordance with the speed and sureness of our method, else we shall commit professional suicide.

I may add this: The last three typhoid patients mentioned live in the house where resides the woman whom I delivered with the forceps, so that there no longer is any doubt about the diagnosis.

MICHAEL SHADID.

Carter, Okla.

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[An exceedingly interesting demonstration of the value of bacterins in typhoid fever. However, we hope no reader of CLINICAL MEDICINE will depend upon this form of treatment exclusively. Bacterins undoubtedly do good, but just how useful they are is still an open question. Certainly there is evidence enough to warrant their general use in typhoid fever, never, however, to the exclusion of remedies which have been tried and found true.—ED.]

PITUITRIN AS AN AID IN OBSTETRICS

Thinking it may be of interest to the readers of CLINICAL MEDICINE, I give herewith, briefly, my experience with pituitrin in obstetric work. I am able to report five cases, as follows:

Case 1. Patient, a multipara, pregnancy of four months. When I was called the woman had been flooding four days and complained of continuous pain. The membranes had been ruptured for twenty-four hours. The os was not dilated. I injected 1 Cc. of a pituitrin solution, and ten minutes later another similar dose. Flooding ceased within five minutes after the first injection, and within thrity minutes everything came away clean.

Case 2. A case of puerperal convulsions occurring in a woman at full term. The physician first called had already ruptured the membranes, but the os was not dilated and the head not fully engaged at the brim of the pelvis when I saw her at 5:30 the next morning, although she had been in pain since 7 o'clock the evening before. I gave this woman three injections of pituitrin at half-hour intervals. Within ten minutes after the last injection the head had descended and was bulging out the perineum. The child was dead and decomposition had already set in. It weighed 13 pounds. As the mother was nervous and excitable, I gave chloroform and used the forceps. The woman recovered nicely from the convulsions.

Case 3. This woman was a primipara, 28 years old, and had been in labor twelve hours when I first saw her. The membranes had ruptured at the onset of labor-pains, which now were weak. I gave 1 Cc. of pituitrin, and contractions came on stronger within ten minutes; half an hour later the head was resting on the perineum, but, as this would not dilate after six hours, with the assistance of another physician chloroform was administered and the patient delivered with the forceps.

Case 4. This woman, a multipara, was three months pregnant and had been flooding and complaining of pain for five days when first seen. The membranes were already ruptured and the uterine os had not relaxed. I gave 1 Cc. of pituitrin solution at 2 p. m., and another similar dose at 2:30. Within five minutes after the first injection the hemorrhage ceased and pain was relieved. The patient slept for six or seven hours, then woke up in pain; so, another injection of pituitrin was given. The condition of the os remained unchanged at this time. Ten minutes after the last injection the woman was delivered, and everything came away clean.

Case 5.—Patient a primipara, ten weeks advanced in pregnancy. Condition one of incomplete abortion, with retention of placenta. The patient had been in pain for forty-eight hours and was flowing. She had had no pain for two hours when I first saw her; in other words, since the escape of the fetus. The uterine os barely admitted the examining finger. I gave two injections of pituitrin solution, 1 Cc. each, at ten-minute intervals, and the placenta and membranes were passed within three minutes after the first injection.

Pituitrin will stop uterine hemorrhage, whether it occurs at term or as the result of abortion. Also, it will strengthen the contractile pains. It has enabled me to do cleaner work, without interference with the uterine cavity, than I was able to accomplish previously with my hands or with the aid of instruments. It saves the blood and the strength of the woman, and, by obviating the necessity for frequent examination, reduces the danger of sepsis.

Personally I see nothing but good in the judicious use of pituitrin in early cases, although I disagree with many other physicians upon these points. It has saved me time,

and, what was of more importance, preserved my patients' strength, and doubtless saved some lives.

As to the active principles, they give me better service every day I practice.

J. S. CARRIGER.

Chelsea, Okla.

A NEW WAY TO KNOW WHEN WOMEN WILL BE MOTHERS

There is in the blood of pregnant women a ferment which causes a splitting up of the albumin of the tissue of the afterbirth. This ferment is absent from the blood of women who are not pregnant. The presence of this enzyme is demonstrated either by the dialyzation or by the optical method. These methods are technical and need not be described.

The discoverer, Professor Abderhalden, has found that the reaction is positive in every case of pregnancy, and always negative in nonpregnant women. His findings have been confirmed by such eminent physcians as Schwarz, Veit, Frank, Heimann, Franz, Jarisch, Henkel, Lindig, and Petri.

The reaction is positive from the middle of the second month of pregnancy on. It disappears from ten to fifteen days after a miscarriage or the birth of a child, and irrespective of the fact of nursing or not nursing the baby.

The reaction is due to the entrance into the maternal blood of substances derived from the child. A positive reaction with the biological test for pregnancy, therefore, means that the person from whom the serum was obtained either harbors afterbirth elements in the body or else has harbored such elements up to a short period ago, which period does not exceed two weeks; it means that she is or recently has been pregnant.

This test will prove most valuable in determining pregnancy in the case of the nursing or nonnursing mother who has not menstruated since her baby was born but whose uterus is enlarged, and also in the case of the girl or woman who has no right to be pregnant and whose trouble may be due to causes other than pregnancy; so, also, in the differentiation of new formations otherwise indistinguishable from the enlargement of pregnancy. Furthermore, it will have a place in medicolegal cases.

L. K. HIRSCHBERG.

Baltimore, Md.

[We wish particularly to commend the test referred to by Doctor Hirschberg. We have used the Abderhalden test for pregnancy repeatedly and found it exceedingly reliable. It is often important to know *early* whether a woman is pregnant or not. This simple test makes it possible to determine this fact with reasonable accuracy. A similar test (also devised by Abderhalden) is used for diagnosing doubtful cases of cancer. We shall be glad to hear from any doctor interested in the matter.—ED.]

INTERNAL MEDICINE NEEDED

Your editorial on the American College of Surgeons has been read and fully approved. The country needs, today, A 1 general practitioners more capable of performing ordinary operations, men with a knowledge of drugs, and, of course, of disease. An organization of internal-medicine men into a society may be needed to prevent competent surgeons from "legalized slaughter" of patients with such diseases as typhoid fever, pneumonia, acute enteritis in children, for instance, which, due to their lack of knowledge of drugs, they are unable to abort or mitigate.

If surgeons and some others knew drugs, we should hear less of crisis in pneumonia; of typhoid coma and deaths from cholera morbus and of the terrible hospital mortality of these diseases. Speed the day when drugs will be thoroughly taught. Personally, during seven years just past, I have had no typhoid coma, no resolution of pneumonia by crisis, and no deaths from enteric diseases in children. And this in an extensive country practice.

ARTHUR H. BEEBE.

Stillman Valley, Ill.

HOW THE DOCTOR CAN PROMOTE HIS OWN INTERESTS

In an editorial in the November, 1913, number of *The Medical Council*, (p. 435) the editor of that excellent journal outlines some of the things physicians of any community can do to protect themselves against quackery, "ethical" and unethical, and increase their own standing as well as that of the profession. We quote a portion of this fine editorial herewith:

"No, doctor, it is not the advance of modern medicine, it is not the efforts of the great rank and file of physicians organized into medical societies, it is not your state board of health that is restraining you in your business outlook; it is very largely *the men in your own community* or it is *you yourself*.

"Have you a hospital in your town, organized by prominent laymen, but in which a little ring of doctors have combined to keep business from *you?* Don't blame the hospital for that; get after the medical ring for practicing in restraint of trade.

"Have you two or three aristocratic and ethics-talking quacks in your town, men who seldom earn an honest dollar, but systematically lie to their patients and 'farm' their practice, keeping people in line because of 'pull' and because the alleged doctor is so popular?

"Have you an oleaginous old druggist or two, holding bank-stock and identified with a lot of good things as a blind to the public to which they are selling every modern abomination in the line of 'dope' and at the same time undermining you at every possible opportunity? Don't denounce these men in public; get evidence and turn it over to the district attorney if they break the civil law, or to their professional societies, if they are unethical.

"Have you a couple of professional abortionists, who have so intrenched themselves that they always have evidence suppressed when they get in trouble? Lay a legal trap for them.

"Have you a 'Medical Institute' in your town, infested with a couple of unconscionable quacks? Look up their records and find if they are registered. Have you newspapers accepting all kinds of medical advertising? Has your local medical society gone to sleep or a little ring therein organized a little-tin-pulled-by-a-string trust? Is it customary for your better-class druggists to dispense their own prescriptions? Is your town rum-cursed by a lot of 'hell holes' with licenses, but disobeying the law in every possible way and wasting the money of the community?

"Have you a lot of fad societies preaching into the women how wicked drugs are and how good the fad is? If you have any or all of these things—and the chances are you have all of them, and more—what are you doing about it? What is your medical society doing? Even if you and they have not the nerve to do anything, just make a survey of your town from the medical standpoint, looking for things in restraint of *your* trade. If you have never done so, you will find so much right at home to interest you that the 'medical octopus' at large will be forgotten in the sight of more tangible things at home.

"And you yourself, doctor; what are *you* doing in restraint of *your own* trade? We leave that matter wholly to you. But you know how easy it is for you to see how Henry, the tailor, is getting old-fogyish; you have noted the rundown condition of the Has-Been Confectionery and the big trade going to the Up-and-Doing Store. Perhaps you have been to Dr. Plodder's office and were struck with the fact that he had no new-looking instruments and books and *no medical journals were on his table.* Perhaps it won't hurt to count up how much *you* have spent upon instruments, books and journals during the last five years. Of course, it was more than Dr. Plodder spent; but, then—

"What's the use? This question, like most others that afflict the tormented soul of the doctor, begins right at home. If it were resident only in Chicago or Philadelphia, the profession at large would have swatted the life out of it long ago. But to do anything to hurt 'our own' institution right at home, Buncombe Medical College, never! 'Oh, well,' you say, 'you see the Coke-Dope Drug Syndicate employs several worthy townsmen of mine. What can I do about it?' And again we say: 'What's the use? Charity begins at home.' So does *the trust* that acts in restraint of *your* trade."

GUATEMALA, THE METROPOLIS OF CENTRAL AMERICA

Guatemala has been the "prize plum" for most journalists in touring Central America. Much has been written about it for the American press, but very much has still been left unsaid of facts interesting to American readers.

My good wife and I have been here at Guatemala City now for two months and what were novel sights to us at first are now commonplace scenes. I promised you to write especially of the public institutions of this city, but there are so many interesting things here that I fear my space will be used before I shall have told it all.

This city, the capital, has a population of 100,000, and is situated at an altitude of 5000 feet. It is built in the old Spanish style, with one-story houses, "patios," high adobe walls, and all the other features. The country is very volcanic and broken. We feel earthquakes nearly every day, but they are of short duration; in the wet season these quakes are more numerous and severe. However, this is the dry season on the west side of the mountains. The climate here is ideal, although the temperature ranges from 55° to 65° F. and we wear medium-weight woolen clothes—and need them; sometimes even

using light overcoats. The soil is very fertile, producing to perfection anything planted in it, flowers especially. Of orchids alone there are native here more than 400 varieties.

This city would become a popular winter resort for the people of the United States if they were but acquainted with the conditions here. Transportation from New Orleans is only $40, while living is reasonable, say, $5 to $10 per week. The republic is full of many hot springs of high temperature. Some six leagues north of here are the hot sulphur springs of Los Acoles. The river Agua Caliente (meaning hot-water river) is formed from hundreds of such hot springs, many of which come to the surface at nearly the boiling-point. Especially hot is the spring of Infiernillo (Little Hell), in which the natives cook eggs and fruits quickly, thus avoiding the trouble of making a fire.

This country could be made a bathing- and health-resort of unrivaled advantages, under the auspices of some enterprising "Yankee." Of all the hot springs surrounding this city, the Zapote is the only one in which scarcely any lime and sulphur are present. Its temperature is 27° C. (80° F.). In order to discuss fully the hot springs of Guatemala, it would take a volume as large as the new testament; I do want to say, though, that I am told, on good authority, that the spring near Estanzuela contains iodine, which is quite probable.

A great deal of poverty and disease prevails in the city of Guatemala and the same is true of the entire country; but these can not be charged to the country or the climate. What arrests the attention of the new-comer most is the vast numbers of cripples and beggars, and the prevalence of blindness and other eye troubles, as also of goiter and hookworm-disease. At first I thought the presence of goiter was due to the constant practice of the women of carrying vast burdens on their heads, but soon I noticed many cases in the men as well. The local medical fraternity have failed to throw any light on the subject.

There is comparatively little tuberculosis here; but, due to moral conditions, the city is pretty well loaded down with syphilis and gonorrhea. This fact will, in a measure, account for some of the blindness and eye troubles. If the general public here were better off financially, a great business could be built up by harnessing up one of these hot springs and thus aid in curing a few thousand well-nigh hopeless sufferers. A first-class American oculist could make good here, I am convinced; also a man who would specialize on syphilis and gonorrhea.

The president, Estrada Cabrera, has done great work, during his fourteen years of official service, for the betterment of the capital city and the country at large. The General Hospital, built under his auspices, is a great institution, and it is nearly always filled with patients. It happily furnishes an abundance of clinical material for the medical school, located nearby.

Through the kindness of Dr. Julio Bianchi, I saw him perform an operation for the removal of the prostate gland. He went through the abdomen to reach the gland, and the result was very satisfactory. I may add that this is one of the best-regulated institutions of its kind in this country. The military hospital has six wards, three each for sick and for surgical patients. The personnel consists of one physician, six practitioners, one nonresident doctor, and sixteen ward attendants. There are two operating-apartments, the septic and the nonseptic. The decorations and floral displays are perfect, as are also the parked avenue upon which the building stands.

Then comes the maternity hospital; but to this institution there is a sad side. There are a great number of illegal births in Guatemala. The girls of the lower class rarely reach the age of 16 years without becoming mothers, and very frequently this happens when they are but 11 to 13 years of age. The maternity hospital became a necessity on account of this very fact. Many of these children (I will so call them) about to become mothers have no money and no place in which to be confined; and without the needed attentions and help of a physician the scene very often was closed by horrible death. This is the greatest benediction I could say for the present administration, praising it for having established this hospital, and, with it, a school for midwives.

Besides those named, there are several small private hospitals, among which I will mention the school and hospital located on the north extension of Seventh Avenue, which is being financed with American money, namely, by the Woman's Board of the Northwest, of the Presbyterian Church of Chicago. The general superintendent is Dr. Mary Gregg while Miss York, also of Chicago, is in charge of the nursing. The latter has three native students under her. The hospital has room for 12 patients, but it contained only two when I was there. For some reason, the institution seems not to be at its best. The

nurse-school has 18 pupils and 3 teachers. The charges are $10 gold per month, including board. It is a very convenient place for rich people to send their daughters to learn the English language and that at a great saving in cost. The school and hospital do very little charity work, which in a way accounts for the small attendance. The people here who need uplifting cannot earn $10 gold per month, and even if they could do so they would not pay out this money for educating their children.

One of the worst conditions here is the general use of "aguardiente," meaning, in Spanish, "jag-water." It is native rum made of sugar-cane. The price at the distillery is about 50 cents gold per gallon. The small barrooms* (250 in this city) sell a good-sized drink for 2 reals. One peso (silver dollar) being equal in value to 8 reals, the drinks cost about 5 cents gold. The fact remains that 5 cents gold is about all you need here to go off on a jag if you use "jag-water." There are 14 distilleries in this city alone, besides many more at other places.

A noticeable thing is the remarkable growth of the celery-plant here. The soil and the climate are far better than in Colorado, and you can raise celery the year around, while the flavor is richer in character and the stalks are very tender. It is not cultivated to a great extent, as the natives have not learned to eat it. The dearest article of food here is butter, costing 50 cents gold per pound. Vegetables and fruits are so cheap it is not worth one's time to raise them.

T. H. HANDLEE.

Guatemala City, Guatemala, C. A.

EMETINE TREATMENT OF DYSENTERY IN SIAM

I have had an opportunity to try emetine hydrochloride in the treatment of four cases of amebic dysentery. This drug certainly does act well, for in every instance my patient was cured, and cured promptly. Here is my first case:

One evening two Indian men came to my house and asked me to give them medicine for dysentery, for a patient who had been ill for three days. I handed them a supply of epsom salt and directed them to bring the man to the hospital if there was no improvement after two days, and on the third day they came with the sick man.

*Barrooms are conducted almost entirely by women and children.

After studying the patient and observing his symptoms for about two hours, I gave him 1-4 grain of emetine hydrochloride at 10 a. m. At 5 p. m. I gave him another similar dose; both hypodermically. The next morning the stools had changed in character, and after the third injection blood and mucus disappeared altogether. After five days' treatment the man left the hospital apparently cured.

E. WACHTER.

Nakon Sri Tamarat, Siam.

THE DOCTOR'S HORSE—AN INQUIRY

One of the readers of CLINICAL MEDICINE has enjoyed Doctor Baker's little paper on "The Care of the Doctor's Horse" (see page 84 of the January issue) and writes to inquire how to use the spirit of nitrous ether in the treatment of spasm of the bladder and urethra in his driving-animal. As Doctor Baker is a long way from Ravenswood, we have referred this inquiry to our friend, Dr. N. S. Mayo, who gives the following advice regarding the use of that remedy:

"Spirit of nitrous ether is best administered in a drench of about a pint of moderately hot water. It can be repeated in an hour, if it is necessary. These cases of spasm of the muscles of the neck of the bladder very frequently occur in horses that have had long hard drives, and then this hot diffusible stimulant seems to give relief.

"A horse so attacked should be placed in comfortable quarters, lightly blanketed, and then be given a vigorous rubbing—particularly of the legs—with wisps of straw. This seems to rest the horse greatly and to tone up the exhausted nervous system. The horse should be very sparingly fed until he has rested. It is best to give first merely a small amount of hay, and later to water him, then follow with his regular feed, perhaps in slightly less amount.

"It is a mistaken kindness to give a horse an extra-big feed either after or before a long, hard drive, as the digestive system is not in proper condition to handle an unusual amount of food."

Should any reader of CLINICAL MEDICINE have questions concerning the horse, if he will write us we shall see to it that his inquiries are attended to by a competent veterinarian. Of course the doctor should always be on good terms with his veterinarian neighbors; but when, as so often is the case, there is no veterinarian handy, he has to do the best he

can. It is for men so situated that we make this offer.

Among the readers of CLINICAL MEDICINE there are quite a number of veterinarians. Some of them write for us occasionally, and we shall be glad to hear from them and others on topics of interest to medical men. The veterinary profession is making great progress.

SIGN OF DEATH AFTER DROWNING: NOTE THE PUPILS

In reading "Vacation Accidents" in THE CLINIC for August, 1913, page 637, the query, "How do you know he is really drowned—dead?" brought up in me the answer, "When both pupils are fully dilated."

It has been my practice, in a large number of cases of approaching death from a wide variety of causes, to observe the pupil carefully; and I have come to regard the fairly sudden relaxation of the iris as the very best evidence and proof of death. The appearance of this phenomenon, in my experience, does not take place before death. There may be dilatation of the pupil, but not to the extent which occurs with the flight of the vital spark.

The only practical application of this knowledge that occurs to me would be the certain diagnosis of death in cases of suspended animation, as in submersion or asphyxiation. Where this sign is present, I should have no hope of resuscitating the person; and conversely. I do not recall in my reading of medicolegal cases any mention of this sign.

S. AUSTIN DAVIS.

Brooklyn, N. Y.

[Doctor Davis is surgeon on a large seagoing ship, and has had peculiar opportunities to study this subject.—ED.]

IS IT LEPROSY—OR YAWS?

In the January number of CLINICAL MEDICINE, page 90, under the title of "Is It Leprosy?" is shown the picture of a woman suffering from a disease of the skin, that affects the face, hands and arms, the appearance of which is suggestive of leprosy. We asked for further information concerning this case, which was reported by Dr. I. N. Campbell, of Sabinol, Texas; we also asked for comments from our readers.

Thus far we have heard nothing from Doctor Campbell, so, we can present no additional facts. However, one of our contributors has suggested the possibility of a prominent type of eczema, saying he had seen cases having much the same appearance. Dr. Lawrence T. Newhall, of Brookfield, Mass., makes the suggestion that the disease may be yaws, and he writes that he has three photographs of yaws taken in Jamaica, W. I., and these are very similar in appearance. He adds that the iodides are employed there against this trouble.

This case, we repeat, is interesting and we shall be glad to give any further information within our power concerning it.

EUGENICS AND ALCOHOL

Among the many instructive articles in your November number, the one by Doctor Young, of Covington, Louisiana, is almost exhaustive in its description and treatment of neurasthenia. We all recognize, of course, the value of "a sound mind in a sound body." Probably the best way to attain this is that of Doctor Holmes's, that is, for the child to pick its ancestry a hundred years or more before it is born. If laws (as now are in force in several states) prohibiting the marriage of diseased persons were general and would be faithfully carried out, the neurotic would soon disappear and there would be a survival of the fittest.

These defectives are the product usually of a tuberculous, luetic or alcoholic ancestry. Banish alcohol absolutely in all its forms, and our prisons and insane asylums will be empty, as is the case in most counties in Kansas. Prohibition will prohibit if it has a strong public sentiment back of it, and will eliminate many of the excrescences—the resort of alcoholics—that are the bane of any community. Not alone the physical status, but also the mental and moral, will be changed to its best standard in any given individual. The results predicted are not the product of fancy or of Utopian dreams, but are proven in a vigorous life to old age. Add the necessary sanitary precautions to any given environment, and you have gratifying individual as well as community betterment.

There is no truer maxim than that "the nation's health is the nation's wealth." A long life of active practice of fifty-seven years, first in country town and for the last thirty years in city practice, gives me the broader vision to interpret conditions arising from given promises.

C. H. SHOTT

Birmingham, Ala.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

STILL retaining in our subconscious minds the barbaric belief that there is some peculiar virtue in self-inflicted punishment, men actually wallop themselves with their work and thoughts of work. The majority of us do not rise above the humdrum and the mediocre. Few of us win records of more than ordinary accomplishment. And, yet, we fret, and fume, and talk, and complain about how pressed we are! Unless we have big results to show for it, all this sputter about being overworked is an acknowledgement of our inefficiency. We frankly declare that we have to keep our low-grade physical and mental machine at its highest speed to grind out even an ordinary living, when such a result should be accomplished easily on low gear.

And, yet, with one of those contortions and somersaults of which the average human mind is always capable, we regard this high-tension living, this straining and sputter and broil as something not to be ashamed of, but actually to brag about and be proud of.

Every sane man has come to recognize that a vacation is a good investment; that a period of rest will pay big dividends, not only in the pleasure of living, but in work accomplished; that the only legitimate excuse for not resting must be one's financial inability to do so. And, yet, the average professional or business man will tell you with some show of pride that he has not had a vacation for five years, that he takes but ten minutes for his luncheon, and that he frequently spends his evenings stewing and sweating in his office.

On first blush, we are disposed to blame this deplorable condition—this universal overwork—to the high cost of living, to the tariff, to the trusts, to the invasion of the business world by women, and to foreign cheap labor. And then, in a mood of rather caustic optimism, we wonder whether the psalmist was right when, in his haste, he said, "All men are liars."

But it is not our work that strains us, pushes us, shoves us, and prevents our rest. It is, as a rule, our splutter and pother about our work; our morbid delusion that we are frightfully busy. We are so busy thinking about how busy we are that we have no time for saner diversions and, often, very little time for actual work. With some neurotic persons, this sense of excessive business pressure is an actual delusion. With many others, it may be classified under a "shorter and uglier" term. Beginning with what the lad of the streets would describe as "bunk" or "fourflush," it finally becomes a pernicious habit, in which, frothing at the mouth, we run round and round in a circle, barking loudly and snapping at our own tail.

There is a fertile field for the neurologist, who dotes on vague terms and voluminous classifications, to be found in what, for want of a better term, we are disposed to call "work madness."

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We like to feel that in this mad careering we are operating the treadmill that keeps the universe whirling around; and, yet, after our final flutter and sputter, after the day of pall-bearers, cotton gloves and tuberoses, this will still be a busy and productive little world whirling merrily on as usual.

The day will come when the admission that one has gone vacationless for years will be regarded as *prima facie* evidence of failure to make good or of weed-choked mentality. The day will come when man will cease to brag about how he must struggle to attain the commonplace; when he will endeavor to give the impression that he can fill an average man's place in life without breaking out his cylinderhead in the effort. That day will come when intelligence is universal and a sense of humor pandemic.

Thoreau never spoke more truly than when he said: "Let not to get a living be thy trade, but thy sport." The thing is, how to do that. Many I have known advise young men to take up with any business but theirs, the advisers'. They abhor it. No matter what it may be, it is cursed—all hard work,

little money, anxiety, disappointments, grovelings, bound to be a failure at last except for a few favored ones who are lucky or too dishonest to fail.

A man told me that, as a youth, he was in the lumber business, which by its trials nearly had finished him in ten years. Then he became a coal-dealer. Five years of this would certainly have ended him, only just before that time expired he shifted to real estate; which, however, was worse than the other two, worse than anything else could be. He supposed he would have to stay in it now, because he was too old to take up with any new vocation. I asked him what he thought he should like. Well, banking, he said, or brokerage. These always paid, the hours were short, the work genteel and easy, and a banker or broker was thought highly of.

Since that time I have known personally a number of bankers and brokers, and I do not find all of them more satisfied with their occupations than this man was with his. One of them wished to be a painter, but never had the opportunity. Another wanted to make things with his hands, to be a creator, to build ships or railroads or even cabinets and other furniture, but somehow it had never come around that way for him. Still another had just drifted into a bank as a boy and staid there, that was all. He would rather be almost anywhere else.

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I suppose it is so with all of us who make the getting of a living our trade and not our sport, for it is our own selfishness, our fear and greed and meanness that afflicts us, not our business. With Thoreau's principle, a man can follow any occupation under the sun he likes and find joy in it, and a living; without it, he must go every gait but the one he would. Happy is he whose work is his recreation.

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We are continually misunderstanding one another's plainest spoken words.

Once in a lecture on "Cause" I referred to Herbert Spencer's views of my subject. I said I would not quote his words, that would require too much time, but should state his principle simply, in my own way; which was as follows:

"A man dies. What is the cause of his death? Cancer. Yes, but what caused the cancer? Eating tomatoes. But all people do not eat tomatoes, what caused him to do so? He liked them. But everybody does not like them, what caused him to like them? His constitution. What caused his constitution? His ancestors. What caused his ancestors? Well, protoplasm. What caused protoplasm? The sun. What caused the sun? *We do not know.* The cause of the man's death, then, we do not know, according to Spencer; and we ascribe it to cancer, because cancer happens to be the nearest link in the chain of events which bound him to the real cause, which we do *not* know. This is the agnostic attitude. We do not know cause."

I did not at the time think it necessary to explain more carefully that I had done that the illustration was a supposititious case, not a real one, having philosophy, and not medicine, for its aim. That was seven years ago. The other day a woman insisted, with as much politeness as good breeding would allow, that at that lecture she had heard me declare that eating tomatoes would cause cancer, that I had cited Herbert Spencer's philosophy in proof of it, and had even told of a man who contracted cancer by eating tomatoes!

If our friends who really wish to understand come no nearer than this to it, maybe we can afford to give the benefit of the doubt to our enemies who appear maliciously to misunderstand us.

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If a man is in business, he doubtless is more warranted in calling attention to the excellence of his wares than he would be if, being a society man, he should extol his breeding or, if a physician, advertise the superiority of his cures. From one point of view, self-exaltation may be taken as a bully joke; and I doubt whether most business men who have succeeded largely have not, in their self-aggrandizement, felt some of the humor of the thing. Otherwise they would hardly have the assurance to carry it out. Or, at first they must have felt it. Custom might change them, and probably does, so that the humor is lost sight of after a while and only the struggle for existence remains.

What a picture it becomes then! One would think a man would rather starve to death like a gentleman or live like one on a dollar a week. It reminds you of the ragged, illiterate scarecrow of a rimester, O'Kelley, who, when Walter Scott was traveling in Ireland, approached him with the following, and for which he received what his delicate compliment called for—a small piece of money:

"Three poets of three different nations born
The United Kingdom in this age adorn:
Byron of England, Scott of Scotia's blood,
And Erin's pride—O'Kelley, great and good."

Some of us are so anxiously charitable that at times we neglect the cultivation of our own affairs in order to inquire into the needs of our neighbors. I know one woman who was so desirous of doing good that she gave a loaf of cake (burned a little on the bottom) to a poor mother of a family who, she was sure, by shrewd ovservation, hungered for a thing of that sort. The poor mother of a family told me that she never had eaten anything so cheap as that cake, and didn't propose to begin then; and before my eyes put it in the swill-barrel.

Once a man came to me for a subscription to buy flannels for a boy who seemed to him to be in urgent want of them, and lo and behold, it turned out that the boy had three suits of better underclothing than I could afford to wear.

Let us be charitable, by all means, for charity is sweet and high and twice blessed. But we need not be too anxious. God is not dead yet, and knows what his children must have. It requires wisdom to exercise charity without "peeping and botanizing," to be helpful without smallness. Some of us do not give with high motive. We have our reasons.

Poor little Miss Charity Bowers
Was fearfully bothered by showers.
"If they'd only hold off,"
She declared with a cough,
"Until I have watered my flowers."

—

Jaundice shows that there is more or less cholemia, and that destruction of the red blood-corpuscles is going on. Iron should be given for the same reasons as in Bright's disease, provided there is no fever.

From 5 to 10 drops of oil of wintergreen or oil of peppermint added to a quart of warm water and used as an enema for washing out the lower bowel after every movement often will completely cure diarrhea and chronic dysentery where the disease is near its end.

A paste made of oat-meal, moistened with glycerin (or olive-oil) 3 parts, and oil of peppermint, 1 part, makes an excellent application for burns.

In the distressing inflammation of the mouth and throat accompanying phthisis, either powdered sodium sulphite or a gargle composed of sodium sulphite, 1 dram, and peppermint water, 1 ounce, will be found a useful application.

Codliver-oil may be beneficially administered in the treatment of skin diseases of a scaly nature, such as eczema, where these are not dependent upon toxemia.

In pneumonia, occurring in alcoholic subjects, when the temperature is low, with a debilitated heart, the tincture of chloride of iron should be given, with digitalin.

Various forms of neuralgias, and especially those of the intermittent type and associated with anemia, are greatly benefited by the arsenates of iron, quinine and strychnine.

In nocturnal syphilitic hemicrania, 1-30 of a grain of calomel every fifteen minutes often gives relief when potassium iodide has failed.

In epilepsy, with twitching of the face and extremities during sleep, which indicates a cranial cause, that is, chronic meningitis, the ointment of the red iodide of mercury should be rubbed into the skull and nape of the neck.

In chronic asthma and bronchitis, and in the form of spasmodic asthma which alternates with skin disease, or which, occurring in an adult, takes the place, as it were, of what would have been strumous complaints during childhood, iodized calcium is very useful. Arsenic also is useful. These are the two best remedies for these conditions.

Dysmenorrhea attended with headache and other disturbances often is relieved by caulophyllin and the bromides or by monobromated camphor and acetanilid, and by placing the feet in hot water.

Arsenic in small doses (gr. 1-60 or less) is very useful in irritative conditions of the stomach when there is vomiting owing to gastritis of a chronic kind, as of drunkards, or vomiting caused by any obstinate condition except a cerebral one.

Sodium salicylate is preeminently useful in acute articular rheumatism, tonsillitis, and chronic constipation, associated with imperfect secretion of bile.

Globus hystericus often is markedly relieved by belladonna or its alkaloid, atropine. In all cases of dyspepsia, nervous, irregular action of the heart, palpitation, or severe stomach-ache, it may be assumed that, whatever be given, it should contain belladonna.

In headache associated with coldness of the surface of the body, pale face, small, and sometimes incompressible pulse, nitroglycerin often does good.

Ergotin is a great adjuvant to quinine in brow-ague, that is, true periodic headaches attended with photophobia.

Small doses of strychnine are indicated in conditions of vasomotor weakness, where persons blush without any reason whatever, as in the case of women, and particularly at the time of the menopause.

Among the Books

FISCHER: "CARE OF THE BABY"

The Health-Care of the Baby. A Handbook for Mothers and Nurses. By Louis Fischer, M. D. Fourth edition, revised. New York and London: The Funk and Wagnalls Company. 1913. Price, 75 cents.

The woods are full of manuals of instruction for the care of the child in health and disease. There is hardly a teacher of pediatrics of any note who has not, at some time or other, written a handbook for mothers and nurses on this subject. Doctor Fischer's is one of the oldest of those belonging to the distinctively modern school, and through its successive editions it has kept pace with the progress of pediatric science. It is clearly and even entertainingly written, and contains, besides the scientific information one looks for from a specialist, a lot of hard common sense on the rearing of children that will not come amiss to the average parent. The physician will make no mistake in introducing this little book into the homes of his patrons.

MORSE: "PEDIATRICS"

Case-Histories in Pediatrics. By John Lovett Morse, A. M., M. D., associate professor of pediatrics, Harvard Medical School. Second edition. Boston: W. M. Leonard, 1913. Price, $3.00.

This book belongs in a series of case-history volumes issuing from the press of this same publisher and proceeding from the pens of the teachers of the various subjects in Harvard Medical School. Thus far there have appeared four of them, namely, upon Medicine, Pediatrics, Surgery, and Neurology; and we hope that there will be many more of the same kind, and also that other authorities and publishers will follow out the idea, for it is a most excellent form of disseminating medical and surgical knowledge. It comes nearest to genuine bedside instruction of anything we have yet seen in medical literature.

Case-teaching was introduced into Harvard Medical School, in 1900, at the suggestion of W. B. Cannon, who was then a student in the school; and it has proven far more effective than recitations, quizzes, and conferences, one of its greatest advantages being that it compels the student to think for himself along practical, clinical lines. There is no reason why the same method should not prove just as effective and thought-compelling when applied to the writing of books for the general practitioner; and the fact is, it has already justified itself in this series of books put out by the Leonard press.

If we were recommending a group of "best books" for the physician, we should assuredly include this Case-Histories series among them; and the one in Pediatrics is no whit behind the others of its set in either quantity or quality. Every doctor should immediately possess himself of a copy and study it earnestly.

"THE PRESCRIBER"

Many of our readers are interested in what is going on in therapeutics, and to those who wish to keep in touch with the new remedies and other applications we can recommend *The Prescriber*, which is published at 137 George Street, Edinburg, Scotland. The subscription price of this journal is ten shillings ($2.50). It may be procured from Mr. Paul B. Hoeber, 69 E. 59th Street, New York, N. Y.

GUENTHER: "PHYSIOLOGY"

Physiology. A Manual for Students and Practitioners. By A. E. Guenther, Ph. D.; and Theodore C. Guenther, M. D., of the University of Nebraska. Second edition, thoroughly revised. Philadelphia and London: Lea & Febiger. 1913. Price, $1.00.

This is one of Lea & Febiger's "Medical Epitome" series. The authors declare in their preface that their aim has been "to gather within a brief compass those facts of physiology which medical students ought to be familiar with in order that they may successfully pursue the more advanced courses of a medical curriculum." This is the customary modest *apologia* of those who write

books of this type. The real truth is, however, that these little books usually contain the gist of the subject, to which the student comes back after he has wandered all around the wilderness of superfluous matter in the larger textbooks; and there is no reason why the authors should not boldly say so. We are teaching certain subjects, such as physiology, altogether too exhaustively these days, and it is well to have epitomes of this kind to keep a check upon ourselves.

ARCHINARD: "MICROSCOPY AND BACTERIOLOGY"

Microscopy, Bacteriology, and Human Parasitology. A Manual for Students and Practitioners. By P. E. Archinard, A. M., M. D. Second edition, revised and enlarged. With 100 engravings and 6 plates. Philadelphia and New York: Lea & Febiger. 1913. Price, $1.00.

This is another of the "Medical Epitome" series. The subject of microscopy and bacteriology, of course, needs no apology for being epitomized; for, it is one of the few subjects in medical science that not only lends itself to this kind of treatment, but actually gains by it. The general practitioner does not need an exhaustive knowledge of bacteriology; indeed, it is a question whether such a knowledge would not be more of a burden than an advantage to him. All he requires is a summary of the practical aspects, and he gets it, in quite adequate form, in a little work of the kind under review. The present edition brings the subject-matter well up to twentieth-century standards.

"MURPHY'S SURGICAL CLINICS"

The Surgical Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. Vol. II, No. 2. Philadelphia and London: The W. B. Saunders Company. 1913. Price, per year: paper, $8.00; cloth, $12.00.

This series of clinical reports can no longer be regarded as an experiment in medical literature. It has won its spurs and established its position. Which is not to be wondered at; for it was a departure that hardly could help but appeal at once to the medical man, because it represents extremely practical clinical teaching. These are not student-clinics, but Murphy's famous clinical talks, at Mercy Hospital, for physicians only, and published just as they are delivered by him, being reported verbatim by an expert medical stenographer. In this way these talks retain all that individual force and charm so characteristic of the clinical teaching of this distinguished surgeon. These "Clinics" are being issued in serial form—one number every alternate month, six in a year—and are sold by the year only.

SHARP: "OPHTHALMOLOGY FOR VETERINARIANS"

Ophthalmology for Veterinarians. By Walter N. Sharp, M. D., professor of ophthalmology in the Indiana Veterinary College. Philadelphia: The W. B. Saunders Company. Price, $2.00.

While, naturally, the field of ophthalmology in veterinary practice is much more limited than as applied to humanity, there has been great need of a textbook for veterinary use. In this book, the author follows human practice very closely. It is clearly written and well illustrated, and should find a place in the library of every progressive veterinarian.

BALL: "OPHTHALMOLOGY"

Modern Ophthalmology. By James Moores Ball, M. D., LL. D., professor of ophthalmology, American Medical College, St. Louis. Third edition, revised and enlarged. With 445 illustrations and 24 colored plates. Philadelphia: F. A. Davis & Co. 1913. Price $7.50.

"Doubtless," said good old Doctor Boteler, "God could have made a more delicious berry than the strawberry, but doubtless He never did." Doubtless there is no man in this country so adequately fitted, by temperament, by knowledge of the subject, by literary culture, and by wealth of first-hand data in his immediate possession, to write a complete treatise on ophthalmology, in all and every one of its phases, as James Moores Ball. And doubtless nobody in this country every has written so worthy a treatise on the subject.

Doctor Ball's book is not a textbook nor a manual nor a monograph, nor even a "system" of ophthalmology. It rises high above all of these in its character and range. It is a scholarly, masterly, well-rounded treatise; as thorough and comprehensive and painstaking in its subject-matter as one might expect of a scientific treatise prepared for the archives of the Royal Society; as finished in literary style as though literary style had been its sole aim and motive; as beautifully proportioned as a piece of Gothic architecture.

It is no exaggeration whatever to say that the book is a classic. Among all that have arisen among works on the eye, there is none greater than Ball's "Modern Ophthalmology."

It must not be supposed that this work has no practical, clinical value. If, in our enthusiasm for the larger, more academic qualities of the work, we have unwittingly discounted these practical, clinical features, we have done the book a grave injustice. We have said that it is a classic; but it is not therefore an archive—not yet. It may, and undoubtedly will, eventually become an archive. But for the present it is exceedingly alive and current. It is so much the more of a practical treasure for being a classic. Its classicity extends to its utilitarian features. Its clinical features are classical, too.

Here there is presented the *best* that the world affords in diagnostics and treatment, garnered with the breadth and thoroughness and rare discrimination which characterize every phase of the work, from every worthy source that is available to human research. It is, by all odds, the high-water mark in American ophthalmological literature; the best single treatise upon the subject that this country has produced. The third edition represents practically an entire re-writing of the whole book.

WEGELE: "THERAPEUTICS OF THE GASTROINTESTINAL TRACT"

Therapeutics of the Gastrointestinal Tract. By Dr. Carl Wegele. Edited by Maurice H. Gross, M. D., and I. W. Held, M. D., both of the Har Moriah Hospital, New York. New York: The Rebman Company. 1913. Price $3.00.

This work is more in the nature of a monograph than of a textbook. Hence, one must not expect to find in it (and, in fact, one does not find in it) a complete or comprehensive presentation of the entire subject of gastroenterology. Rather, it contains a report of the experimental work and findings of the distinguished author himself in certain phases of gastrointestinal diagnosis and therapy. Nevertheless, its range is pretty wide, covering all the organs of the upper digestive tract, including the pancreas; and the author's investigations and observations seem to have ramified into almost every conceivable nook and cranny of the subject.

A special chapter is devoted to x-ray diagnosis of gastric and intestinal conditions; but we notice that the value of electric modes in the treatment of these conditions is not very highly regarded by the author. This attitude may or may not agree with the views of the majority of physicians—especially American physicians—but, as we have said, the book is a monograph rather than a text book, and therefore the obtrusion of the author's personal opinions is not only allowable, but desirable. We are gratified to see that he gives such strong emphasis to the role of dietetics in gastrointestinal prophylaxis and therapy. The preparation of the book and its illustrations are in Rebman's best style.

MOORE: "BOVINE TUBERCULOSIS"

Bovine Tuberculosis, and Its Control. By Veronus A. Moore, B. S., M. D., V. M. D., professor of comparative pathology, bacteriology, and meat inspection, New York State Veterinary College at Cornell University. Ithaca, (N. Y.): Carpenter & Co. 1913. Price $4.00.

This is a comprehensive and, yet, concise work upon the subject under treatment, and the recognized standing of the author as authority in the realm of comparative pathology makes this especially valuable as a reliable reference-book, and it will prove invaluable to anyone interested in this important subject. The volume is finely illustrated, while another excellent feature is its bibliography upon tuberculosis among cattle.

FORTNER AND LEWIS: "GENITOURINARY DIAGNOSIS AND TREATMENT

Genitourinary Diagnosis and Therapy. For Urologists and General Practitioners. By Dr. Ernst Fortner, Berlin, and Bransford Lewis, M. D., St. Louis. With 43 illustrations. St. Louis: The C. V. Mosby Company. 1913. Price $2.50.

In looking over a volume of this kind, one can not but be forcibly impressed with the vast difference between a book on genitourinary medicine and surgery in this present time and one on the same subject not longer than ten or twelve years ago. For one thing, the scope of the genitourinary specialist has greatly enlarged during the last decade. He is no longer the dabbler with gonorrhea and chancres that he used to be, but he now covers, in a broad fashion, the entire field of anatomy and physiology included in the urinary and genital functions. And, for another thing, our knowledge of these matters,

and our dealings with them, have developed from mere empirical pottering to a very thorough and exact science.

All of this wonderful change is well mirrored in the book before us. It is not very detailed in its makeup, it does not dwell upon matters of minor importance; rather, it is devoted entirely to the larger aspects of the subject, and in these it deals in an explicit manner that is calculated to expound the modern status of genitourinary surgery to the general practitioner. An appendix gives an excellent, comprehensive summary of the vaccine and serum treatment of gonococcic infections.

NATIONAL-INSURANCE PRESCRIPTIONS

Here is a little booklet, published by *The Prescriber* (137 George Street, Edinburg, Scotland) which, for a sixpence, furnishes the doctor a collection of about one hundred useful prescriptions (grouped according to their uses), and which practitioners employ, under the National Insurance Act, to look after the health of their British constituents. Of course, to practice with cut and dried prescriptions is not very scientific and not always very satisfactory; but, really, many of the prescriptions included in this little book are excellent and might well be availed of not less by those standing high in the profession than by the most practical practitioners.

HUNTINGTON: THE "WALLED CITY"

The Walled City: A Story of the Criminal Insane. By Edward Huntington Williams, M. D., formerly assistant physician at the Matteawan Hospital for the Insane. New York: The Funk and Wagnalls Company. 1913. Price $1.00.

In the preface to his romance "John Inglesant," the author, defending himself from the possible charge of dealing with serious matters through the frivolous medium of a novel, boldly declares that, if John Hilton had put his classical work on Pain in the form of a novel, instead of that of a treatise, for every one heart to which his book brought peace and hope there would nave been a thousand. We thoroughly agree with Mr. Shorthouse, as we imagine every intelligent person of today will. And we are inclined to paraphrase his statement in regard to the book now before us.

Doctor Williams has told us an intensely interesting and romantic story of the Walled City—the very name has an imaginative twang to it that suggests all manner of fantasy and extravaganza, and the story does not disappoint the expectation. The knowledge that it is a true story only heightens the romantic interest. One cannot help thinking, all the while he reads, What material for a realistic novel!

It is the best-written inside, intimate narrative of the modern insane asylum that we have yet seen; the best since Charles Reade showed us, in fiction, the interior of quite a different sort of madhouse. We hope it will be widely read, not only by doctors, but by the people at large. We should not at all be surprised to see some of our fiction writers borrowing its material. There is no use trying to review the book. All we can say is, Read it—by all means, read it.

CABLES: "DIAGNOSIS AND TREATMENT"

Golden Rules of Diagnosis and Treatment. By Henry A. Cables, B. S., M. D., Second edition, revised and rewritten. St. Louis: The C. V. Mosby Company. 1913. Price $2.25.

This little book does not pretend to be an original work, but is an epitome of the literature on the subjects considered, supplemented by the author's own experience in private and hospital practice, compiled and presented in a manner that seems to him the best for the purpose in view, namely, a ready reference of diagnosis, treatment, and remedial procedure.

Chief importance is given to the clinical methods of diagnosis; but the laboratory is drawn upon as often and as extensively as the author deems necessary. And this would seem to be a wise division of the matter, for, in our modern teaching we are perhaps emphasizing the laboratory side of diagnosis a little too heavily, and, as the author rightly says in his preface, "a physician who attempts to make all diagnoses by the laboratory route will find the way fraught with tedium and uncertainty." The book should prove of assistance to the busy physician in obtaining needed information readily and authentically.

We note with special pleasure that Doctor Cables uses many of the remedies with which readers of this journal are familiar—including not only a considerable number of the active principles but also some of the other drugs which we have found so useful in typhoid fever, rheumatism, and other severe ailments of every-day occurrence.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Answers to Queries

ANSWER TO QUERY 5930.—"Bust Developers, Flesh Builders, etc." For the benefit of L. D. N., and others I will say that the use of a high-power incandescent therapeutic lamp, used either alone or, what would be better, in connection with a vibrator and suitable local remedies, will give the best results in developing the bust.

J. A. BURNETT.

Hartshorne, Okla.

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ANSWER TO QUERY 5973.—"Onychosis." To cure this trouble of the finger-nails, you can bank on fluoric acid 30 x dilution. Let the patient take it in 2-drop doses three times daily, continued for two weeks. Then discontinue the remedy for two weeks, after which it may be resumed. It is effective whether the patient is a child or an adult. The remedy is procurable at any homeopathic pharmacy.

A. C. SHUTE.

Pottstown, Pa.

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ANSWER TO QUERY 5965.—"Gastric Ulcer or Carcinoma." The subject referred to in this query in the January CLINIC opens up a very interesting question, and an important one as well. At times it is very difficult to solve the question as to whether we are up against simple gastric ulceration or one of carcinoma. In the case of the latter, the characteristic cancerous cachexia appearance of the patient is not always present. In cases which have come under my own observation, the "coffee grounds" ejected were more in evidence in gastric ulcer than with a carcinomatous condition of the stomach; in the latter condition, the cancerous growth generally was located at the pyloric end, or orifice, of the stomach and the hemorrhage much more profuse, passing by way of the anus in tarry shreds.

As for the treatment, in either case palliative remedies, principally lead and opium, have been the most satisfactory and effective in my practice. I recall one interesting case occurring in my early practice, that may possibly interest THE CLINIC "family." The patient in question, whom I had known quite well from my boyhood, was a man of some seventy years; and one whom I knew to have been quite a hard consumer of ardent spirit throughout his life. I attended him during his last illness, which was of several months' duration.

Some time before his death, his family expressed the wish to have an older physician —my former preceptor—called in consultation. After hearing the history of the case and examining the patient, this consulting doctor very bluntly declared in the hearing of the patient that it was a clear case of cancer of the stomach. But I dissented vigorously, and an animated controversy followed. However, this was soon terminated by the patient, who, raising his hand and commanding us to stop, asked whether his case was hopeless. Being assured by the old doctor that it was, he turned to me and said: "Doctor, when I die, you make a postmortem examination and settle the question then. I've heard enough of it!"

The patient died three days afterward, whereupon I invited the old doctor to be present at the necropsy. On laying open the stomach, several ulcerated patches were disclosed, and these the old doctor contended were cancerous, while I maintained that they were simple gastric ulcers resulting from a life of dissipation. The stomach was then subjected to an expert microscopical test for cancer-cells, but none were revealed. The doctor who made the microscopical examination reported that no cancer-cells were present and that it was a clear case of gastric

ulceration. Nevertheless that old doctor wouldn't give in even then; thus verifying the old adage that "a man convinced against his will is of the same opinion still."

GEORGE D. STANTON.

Stonington, Conn.

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ANSWER TO QUERY 5958.—"Chronic Rheumatism and Arthritis Deformans." It is possible that C. O. R.'s patient (December p. 1056) has both chronic rheumatism and polyarticular arthritis deformans. Clinically, these two diseases are entirely distinct; and the rheumatism may be completely cured and the characteristic nodules entirely removed from the skin without affecting the arthritis deformans in the least. I once had such a case.

Passive hyperemia I consider of no value in either of these diseases; but possibly I have not tried out this measure sufficiently.

Active hyperemia, produced by means of dry, hot air at a temperature of 400° F., is of the highest value in acute rheumatism, of only little value in chronic rheumatism, and of no value at all in arthritis deformans; that is, unless it can be applied to the entire body, especially the spine. If the patient lies on his back while taking the treatment it is of no value. If, however, the spine gets the full benefit of the hot air it is of considerable value and may be expected to assist materially in the cure.

Osteopathic manipulation is of little or no value in acute articular rheumatism, of very great value in chronic rheumatism, especially the nodular form, and of no value in arthritis deformans. The most useful manipulations are petrissage of the affected parts and deep centripetal effleurage of the entire limb. These two procedures alone will cure chronic rheumatism, if the cause no longer is active.

Arthritis deformans is essentially a systemic disease, and local and surgical remedies here are useless. The main dependence must be placed on drugs, and the only suggestions I can add to the editor's excellent treatment of this part of the subject are these: (1) Give the nuclein intravenously—in tablet form nuclein has given me no results. (2) Add arsenic trisulphide, or substitute it for other compounds of arsenic. However, large doses are required (three times a day). This is valuable, in the early part of the treatment, as a germicide, but has no other effect. To reduce enlarged joints, we must rely mainly upon iodine.

CHARLES F. MORRISON.

Apopka, Fla.

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ANSWER TO QUERY 5961.—"Circumcision of Infants." The dressing left on the wound after circumcision is almost as important as the operation itself. The collodion dressing has immense advantages over everything else, especially for the patient and whoever takes care of him. With this, he has no pain and the child gives no more trouble than if no operation at all had been performed. Other wise, every urination irritates the wound, the patient screams with pain, and healing is delayed.

I used to place a small roll of gauze, just sufficient to cover the wound (after placing the sutures), and seal it all over with collodion: but if a clean operation is done there is no need for drainage. It is in every way more satisfactory to cover the wound with flexible collodion, and let it go at that.

CHARLES F. MORRISON.

Apopka, Fla.

Queries

QUERY 5979.— "Fluorescin Test for Death." J. E. B., Wisconsin, calls our attention to the following item which has appeared recently in several medical journals.

"A remarkable new method of deciding absolutely whether a person is really dead and thus avoiding a possible premature burial is announced by Doctor Icard, of Marseilles. Its efficacy depends upon whether the blood is still in circulation or not. The test consists of a subcutaneous injection of a small quantity of fluorescin, which is quite harmless but one of the most vivid coloring-matters known. If there be the slightest motion of blood the fluorescin stains the blood a vivid golden-yellow, while the eye becomes a deep emerald-green."

Our correspondent asks us to state (1) the amount of fluorescin injected hypodermatically, (2) how long a period elapses before the eye regains its natural color, (3) how soon after injection the eye will show the "emerald-green color," and (4) whether the test is dangerous.

A careful search of the literature at our disposal fails to reveal any mention of the

fluorescin test for death, further than the statement in the addendum to Gould's Medical Dictionary to the effect that the injection of 16 grains of fluorescin colors the mucosæ yellow inside of a few minutes. Just how long staining of the mucosæ lasts, we cannot say. We should imagine, however, that the tissues would continue stained for several days.

We intend experimenting upon animals in order to secure definite information upon this subject.

We may add that fluorescin is derived from fluorescëin, and is, chemically, resorcinphthalin. Like the former, its solution has been employed in ophthalmology for detecting minute lesions of the sclera, a drop of a 2-percent solution on the eyeball revealing the sore by its yellow discoloration.

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QUERY 5980.—"Indications for Glonoin." H. L. G., Illinois, wants us to state when to use glonoin, and why. "From my understanding of its physiological influence, and experience on myself and others," he writes, "I consider it entirely out of place in combination with heart medicines, as, for instance, the usual 'heart' tablets containing several ingredients. I believe that much harm thus is done, often unknown to the doctor. I consider nitroglycerin a remedy in a class all by itself. I deem it a drug which should be used apart and supplementary, never continuously in heart conditions."

To a certain extent we agree with you; on the other hand, though, we must remember that the action of glonoin, while prompt, is rather evanescent. You, therefore, may give glonoin in conjunction with other drugs acting more slowly and persistently, the latter maintaining the effect.

We are sure you will readily understand the rationale of such medication. Glonoin is a stimulant in small doses and, as you know, produces flushing of the skin and fulness of the cerebral vessels. It acts, therefore, upon the vasomotor nerves and dilates the arterioles. Its use is indicated whenever it is deemed advisable to relieve internal congestion by drawing the blood to the surface: where anemia of the brain exists, i. e., collapse, syncope, in angina pectoris, and for the relief of internal pains of congestive origin.

To secure the best results, the nitroglycerin must be given in dosage enough to cause flushing of the face, fulness of the head, and increase of cardiac energy. In emergency cases, three or four granules (gr. 1-250 each), dissolved in hot whisky or water, may be given, or a solution injected hypodermically; the dose being repeated every fifteen to thirty minutes, until the characteristic effect of the drug is produced. The most alarming symptoms produced by giving full doses of glonoin are quickly recovered from. No lasting bad effect has ever been observed.

We must recall that during a paroxysm of renal, hepatic, uterine, stomachic or intestinal colic the face is pale and looks anxious, and the skin cold and moist. It is evident that the arterioles of the integument are contracted; hence, we have a condition of capillary anemia, which invariably produces pain and also spasmodic contraction of the muscular tissues.

It is true, that the vessels of the organ or structure involved may be dilated (causing congestion of the part), while the arterioles in all the other parts of the body are contracted. In either case, nitroglycerin, by its action upon the vasomotor centers, overcomes the contraction of the arterioles, flushes the anemic capillaries and, by removing the cause, dispels the symptoms.

In dysmenorrhea, which is a very common disorder, attended with its severe pains, we ordinarily find more or less uterine congestion; throbbing, aching and pricking sensations in the womb are complained of, and the natural degenerative process (accompanied by exfoliation of the endometrium) proceeding slowly, the underlying capillaries, covered with a firmly organized membrane, become congested and cannot disgorge themselves. Here, understanding the cause, we naturally should divert the blood from the uterus. We cannot accomplish our purpose better than by administering glonoin. Other remedies may be added or given later to maintain the effect.

Glonoin, therefore, is a distinct emergency remedy and in many instances should be given alone, but, understanding its action thoroughly, we must allow that it may prove a useful synergist, or rather that its addition may pave the way for the action of other drugs and render them more certain.

As an illustration: In angina pectoris, glonoin gives almost instant relief, by relaxing spasm and vascular tension. As is pointed out in the "Textbook of Alkaloidal Therapeutics," the instantaneous relief from agonizing pain and sudden danger forms one of the most satisfactory exhibitions of therapeutic power known." Within an hour the effect of glonoin will have passed, when further cardiac disorder is apt to appear,

unless we supply immediate tone to the sorely tired muscles by giving cactoid.

Cactoid does not act as rapidly as glonoin, but it begins to act as the glonoin effect wanes, and thus tides the organ over a most trying period. Glonoin and atropine also may be given together, especially where a condition of alternant dilatation and contraction of the vessels obtains.

You will find glonoin an ingredient of a "heart-tonic" tablet. This formula, as we have pointed out, is of the "shotgun" order, but clinical experience has proven its utility where it is impossible to make a precise diagnosis or carry out close therapeutic measures, although the patient is in a serious condition and relief essential. Here, the combination of remedies should meet the requirements; chiefly, as we have already stated, by controlling acute congestion and then maintaining normal conditions.

You are aware, of course, that in cirrhotic nephritis, where the pulse is tense and small and the heart hypertrophied, glonoin gives excellent results. The tension which the drug overcomes, however, inevitably returns; therefore, as it would be undesirable to continue to give glonoin every hour or two, we must try to maintain circulatory equilibrium by the use of suitable adjuvant remedies.

Sometimes, also, it is wise to give glonoin and strychnine or glonoin and brucine together. Brucine acts quickly enough to counteract the depression which may follow full doses of glonoin.

We suggest that you read the chapter on glonoin in "Alkaloidal Therapeutics."

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QUERY 5981. — "Solidago Aurea in Catarrh." J. M., Texas, asks: "What have you to say about treating catarrh with solidago virga aurea? What literature is there on this subject?"

We were not aware that solidago is being used in the treatment of catarrh. It is possible that the drug has been recommended by some contributor to CLINICAL MEDICINE, though we are not able to locate such an article.

No active principle or concentration of the drug is available, to our knowledge.

Solidago virga aurea, European golden-rod, is allied to solidago odora, our sweet-scented golden-rod, or Blue Mountain-tea. It is said to relieve flatulent colic, amenorrhea, and sickness at the stomach. The oil is reported to be carminative and diuretic, while preparations of the flowers are considered aperient, tonic, astringent, diuretic, and beneficial in gravel, urinary obstructions, ulceration of the bladder, and the early stages of dropsy.

Solidago rigida, or hard-leaf golden-rod, is mentioned in King's American Dispensatory, and is said to be a tonic, astringent, and styptic. It was recommended some years ago, by Doctor Bone, of New Jersey, as a powerful hemostatic. The leaves and flowers are the parts employed. The American Dispensatory states that solidago deserves further investigation.

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QUERY 5982. — "Purpura Hemorrhagica." C. D. F., Ohio, has in his care a woman with a stubborn hemorrhagic purpura, this patient having gone the rounds among some of the "good men." These have prescribed styptics and ergot preparations, also calcium chloride, geranium, and a lot of other things. The Doctor is now administering a combination of hydrastis and viburnum, and although some relief is secured at the menstrual periods, the same prescription does not prove effectual otherwise. Hydrastinine, our correspondent thinks, should be the proper remedy in this case.

Tonics and vitoincitants are, of course, invariably necessary in conditions of this nature. Hydrastinine, however, can hardly be expected to produce positive results. This alkaloid, through its action upon the smaller blood-vessels, is strongly hemostatic, proving peculiarly useful in postpartum hemorrhage.

We must remember that purpura may, and does, occur in many conditions associated with altered states of the blood. The treatment, therefore, is symptomatic, to a great extent.

In purpura hemorrhagica, the constitutional disturbance is severe. Not infrequently the pyrexia may reach 104 to 105° F. In favorable cases, reoccurrences may take place every few days, and recovery ensue after weeks or months. Naturally, anemia is a serious complication.

As the more modern writers point out, purpura must be regarded merely as a symptom, so that it is the underlying condition that must be ascertained. The blood should be examined, and leukemia, especially the acute lymphoid form, be excluded.

Calcium salts, alternated with liquor arsenii compound (Barclay), prove most efficacious in these conditions. Normal horse-serum may be given a trial in appropriate cases, for many patients have responded favorably to from 10 to 30 Cc. of it, repeated

three or four times a day. Remedies such as hydrastinine, hamamelis, and other constringents, are useful only when applied to hemorrhagic areas of the mucosa.

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QUERY 5983.—"Gonorrhea and Marriage." R. W. H., Wyoming, has a patient who has had gonorrhea and now is desirous of getting married. He wants a positive assurance that he is free from gonococci. About one year ago the discharge ceased, but he has been rejected by a physician (after an examination) for admission to membership in a benevolent association. The man desires a microscopical examination of his urine, and whatever else is necessary. Just how he shall proceed is the question.

The patient's urine should be collected, by the three-glass method, upon his arising in the morning. Proceed as follows: The 2 or 3 ounces of urine first voided is passed into one vial; the next, and greater portion, of voiding, is collected in a second vial; and the remnant of 1 or 2 ounces in a third one. These containers (which must be sterile)are then marked "1," "2," and "3," respectively. The prostate gland should be massaged, also, and a specimen of this prostatic discharge, as well as a swabbing from the deep urethra (both properly plated), must accompany the three samples of urine.

Unfortunately, one such examination, if results are negative, will not suffice; hence, if there is the slightest sign or suspicion of involvement, this procedure must be repeated during two months, at intervals of two weeks.

If at any time any shreds or pus-cells are found in the urine or gonococci or pus in the massage products from the prostate gland or vesicles, consent to marriage must be withheld. Also, remember that it is necessary to use a urethroscope. If any lesion is demonstrable, the physician should refuse his sanction of marriage and insist upon a systematic course of treatment, prolonged, if necessary, for weeks.

Men unwilling to undergo such treatment or to wait the necessary time must be informed by the physician that he cannot assume any responsibility as to the consequences of the marriage. If the disease has not been completely eradicated, an exacerbation frequently occurs during the first weeks of married life. On the other hand, if no lesions in the urethra or gonococci and pus in the discharges can be discovered by repeated examinations, the patient can marry, and we may feel assured that infection of the wife is extremely improbable. The doctor, at least, has exercised due caution.

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QUERY 5984.—"Mucous Enteritis." J. A. M., Missouri, writes us as follows:

"What shall I do for a man 72 years old who always enjoyed good health until two years ago, when he began to spit up a frothy mucus and void the same kind of substance by way of the bowels. All this time his tongue has been heavily coated and during sleep slightly swollen, and he complains of an extremely bitter taste in his mouth. He hears all kinds of loud noises in the ears, such as that of frogs croaking, locomotives whistling, bells ringing; so much so, in fact, that these noises often keep him awake. When the mucus is the most abundant the tongue also is worse and the noises in the ears are loudest, and he then also has severe epileptic seizures. His urine is normal, except after such a seizure, when it is heavy with phosphates and a small amount of albumin. These attacks recur until the mucus is thoroughly worked off by means of cathartics; and then, if the tongue can be kept clean for a few days, he will have no further seizures and begins to look like a new man. But, in spite of all my treatment, this mucus persists in developing anew. The man is not a gormandizer, nor is he constipated. The mucus is as clear as the white of an egg, but much more tough. There is no evidence of internal soreness or other lesion. Has this man a tapeworm, or what, pray, is the matter with him and what would you advise giving him?"

We regret to say that it is not possible to venture a positive diagnosis from the meager data furnished, although we are inclined to think your patient suffers from mucous enteritis or a severe form of catarrhal gastritis, with pronounced autotoxemia as a result. Should he harbor a tapeworm, segments will be found in the stools from time to time. It would be advisable for him to watch the passages carefully for a few days. We suggest sending a typical specimen of the feces, as also some of the expectorated mucus, to our pathologist, for examination.

At the same time, doctor, give us a clear, complete clinical picture. Pay particular attention to the area of hepatic dulness, noting any tender regions revealed by deep pressure. See whether you can outline the stomach and transverse colon; also examine the rectum by reflected light.

You do not state whether the patient is fat or emaciated; neither do you give us any idea as to how long the supposedly epileptic

seizures have been present. The advanced age of the patient must, of course, be considered. Has he ever been addicted to the use of alcohol? What is the blood pressure and the pulse rate? Has any blood been voided with the mucus?

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QUERY 5985.—"Peculiar Eruption in Newborn." C. P. M., Oklahoma, presents a very peculiar case and asks for a general discussion.

"A married woman, 22 years of age, mother of two children, was delivered of what seemed to be a normal girl baby. The baby was washed and dressed, the ordinary antiseptic precautions being observed. After four or five hours, the baby became very fretful; by the eighth hour, its eyelids started to swell and a papular eruption began to break out symmetrically over the entire body, and these lesions, 1-16 to 1-8 inch in diameter, would shortly break down and discharge a thin yellow pus. On the second day, the eyelids were considerably swollen. The discharge was a thick, cheesy pus, occasionally blood-streaked. Eruption no better. Third day, considerable edema of eyelids, and still discharging pus of the same character and occasionally bleeding a little; general eruption no better. Fourth day, eyes slightly improved, and still discharging pus freely, occasionally would bleed a little; general eruption no better. Fifth day, eyes still improving, but yet discharging pus, though not so freely as the day before; general eruption improving fast. Sixth, seventh, eighth, ninth, and tenth days, marked improvement of eyes and of general eruption as well. Twelfth day, case dismissed, baby doing nicely.

"History of the family is negative; but the first baby had this same general eruption. Temperature of mother was normal. Temperature of baby slightly elevated at times only. Maternal discharges lasted for some ten days after birth; odor and color normal. Placenta was expelled within thirty minutes after birth; its condition normal. In fact, all was nice and well with the mother.

"Treatment: Cleansing of the eyes with a saturated solution of boric acid, followed by instillations of a 1-percent silver-nitrate solution, then dressing with plain gauze. The general eruption was dusted with an antiseptic powder."

This is a very peculiar case. It hardly seems possible that the infection could have occurred *after* delivery; and, yet, were it a staphylococcic infection of intrapelvic origin, the health of the mother would certainly not be "continuously satisfactory." That the previous child presented the same peculiar eruption, points directly toward a maternal origin. The fact that the temperature of the mother was normal and there was no evidence whatever of abnormal condition of placenta, lochia or birth-canal, while the child's temperature was only slightly elevated at times, naturally increases the difficulty of arriving at a diagnosis.

As a matter of fact, without a careful examination of the mother's blood and the discharge from the child's lesions, it would be impossible to ascertain definitely the nature of the infection. The Neisser bacillus, however, probably is responsible for this trouble.

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QUERY 5986.—"Elongation of Cervix." J. J. C., Oklahoma, reports the case of a peculiar anatomical anomaly in a woman. This woman is 28 years of age, menstruates regularly every twenty-one days, always has enjoyed good health, never requires medicine other than an occasional laxative. She has been married six months, about.

The cervix of the uterus is very much elongated, extending to and beyond the urethral orifice. It is between two and three inches long and very slender, and at times it interferes with micturition; it readily doubles on itself. The body of the uterus appears normal as to size and condition. Says our correspondent: "Excision seems to be clearly indicated. But what as to her future? In case of pregnancy, what? She is adverse to any operation, if avoidable. Would pregnancy be at all probable in her present condition?"

We are at a loss to understand how an elongated cervix can interfere with micturition, or come in contact with the urethra, as the woman avers; for, even if it is slender and readily doubles upon itself, one would not expect it to turn upward. The length of the cervix under such circumstances must materially exceed three inches, unless the uterus is prolapsed. If children are desired, operation clearly seems to be indicated, for pregnancy is not likely to result unless this abnormality is corrected.

Such elongations of the uterine cervix are congenital and the result of hypertrophy of the normal tissues, this over-growth sometimes being so great that the cervix protrudes from the vulvovaginal orifice. Naturally, the accompanying stenosis and changing position must interfere with conception. Amputation is the only remedy, provided there is no uterine prolapse and relaxation of the vaginal walls.